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BULLETIN No. 147

MARKET CLASSES AND GRADES OF MEAT

By LOUIS D. HALL



URBANA, ILLINOIS, JULY, 1910

SUMMARY OF BULLETIN NO. 147

1. Objects: To describe and illustrate the standard classes and grades of beef, veal, mutton and pork recognized in Chicago wholesale markets; and to define technical terms that are commonly used in wholesale meat quotations.

BEEF

2. The general divisions of the beef trade are (1) Carcass Beef, (2) Beef Cuts, and (3) Cured Beef Products. Page 155.

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The terms "Native," "Western" and "Texas" beef each include various classes and grades of carcasses, and refer to general differences in form, finish and quality. Page 185.

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MARKET CLASSES AND GRADES OF MEAT

BY LOUIS D. HALL, ASSISTANT CHIEF IN ANIMAL HUSBANDRY

The objects of this bulletin are to describe and illustrate the standard classes and grades of beef, veal, mutton and pork of the Chicago wholesale trade, and to define various technical terms that are commonly used in wholesale meat quotations.

The most intelligent production of animals for slaughter involves a knowledge of the standard requirements of the meat market. Breeders, feeders or investigators who consider only the cost of production and the market value of the live animal, ignoring the demands of the meat trade, overlook one of the most important factors that affect the live stock market and may thus fail to follow the most rational lines of improvement in breeding and feeding.

Live stock producers, however, have exceedingly limited opportunities for becoming familiar with this subject. The rapid development of transportation, refrigeration, slaughtering and packing facilities has led to the present system of large markets separated by distances which make them practically inaccessible to a large majority of stockmen. Further, since animals are sold by live weight the shipper feels concerned with their value on foot rather than their dressed yield. Finally, definite classifications are lacking in some branches of the meat trade, and the classifications in use are often complicated by variations in market conditions. The trade has become so vast and complex that it is very difficult—and has become increasingly difficult with each succeeding year—for one not engaged in the meat business to secure a definite knowledge of its various branches. The present tendency toward a more highly centralized organization of the retail meat trade in some localities increases still further its inaccessibility to the live stock producer. As a result of these conditions meat dealers and consumers are far more familiar with the subject than meat producers. The following descriptions, therefore, are intended primarily to be of value to breeders and feeders who do not have opportunities to secure the information directly. With

an understanding of meat trade requirements it is possible for a stockman to judge the carcass yield and quality of his animals as intelligently as buyers at the stock yards; because his knowledge of the feeds used, length of feeding period and gains made, are as essential in making such estimates as the apparent form, condition and quality of the fat animal, upon which points the buyer must chiefly rely.

The descriptions herein presented are based on data secured by the writer in a personal investigation at wholesale meat markets at the Union Stock Yards, Chicago, which are the largest establishments of their kind in the world; also at prominent wholesale and retail markets in Chicago and other cities which are supplied from the large houses at the Union Stock Yards. The engravings are from photographs taken under the writer's direction at the markets and at this Experiment Station. The officials and salesmen of the large packing houses and the retail dealers, jobbers, and other expert authorities who were consulted gave the most willing assistance. The valuable suggestions and information furnished by these gentlemen are gratefully acknowledged.

The classifications under which meats are quoted differ slightly in different American cities according to the nature of the supplies received and the peculiarities of the local trade. They are essentially alike, however, at all the great packing centers of this country, and since most American wholesale markets are supplied from these centers, the classification as presented may be regarded as standard.

Market classifications of meat, like those of live stock, are more or less flexible because of the varied and varying conditions which affect the industry. In those branches of the trade in which the current market terms are vague and the classifications loose, the writer has attempted to present the subject as systematically as possible without exaggerating the classification actually in use. It is impracticable to include here all the minor and intermediate grades of meat within each class, and this bulletin describes only those classes and grades which may be considered standard or representative. It is also difficult to describe a grade of meat independently of others within its class. Generally, therefore, each grade should be studied in connection with those above and below it.

Attention is called to the fact that the following classifications are those of the wholesale meat trade and not of the live stock market, and that they are described independently of the latter. The weights given refer to dressed carcasses and cuts, and in no case to live animals. Altho in some instances the classes of meat correspond to those of live stock, they are in the main quoted and

sold quite separately and differently from the live animals from which they are obtained. It is outside the objects of this bulletin to consider the relation of the animal to its meat products. It is hoped, however, that it will assist materially in placing such investigations on a more exact and uniform basis than would otherwise be possible, and that it will increase the number and significance of future investigations along this line.

BEEF

The general divisions of the beef trade are (1) *Carcass Beef*, (2) *Beef Cuts* and (3) *Cured Beef Products*. The term *Fresh Beef* includes carcass beef and beef cuts. It refers both to chilled beef, which is held in refrigeration at 36° to 38° F. for a few days or weeks only, and to frozen beef, which is stored at 10° to 15° F., usually for several months. About four-fifths of the beef trade consists of fresh beef, the remainder being converted into various products such as barreled, smoked and canned beef, sausage meats, etc.

CARCASS BEEF

About one-half the supply of fresh beef sold in wholesale markets is carcass beef (sides and quarters). The two sides or halves of a carcass are termed a "cattle". In the right or "closed" side the inner surface of the kidney fat is attached to the loin while in the left or "open" side it is free and a portion of the "skirt" (diaphragm) extends to the tenth* rib, forming the "hanging tenderloin". The two sides are nearly equal in weight, but the open one is often one percent the heavier. When sides are sold separately no discrimination in price is made between rights and lefts.

Sides are quartered or "ribbed" between the twelfth and thirteenth ribs* when taken from the chillroom either for shipment or local delivery, except export and "Boston" cattle, which are cut between the tenth and eleventh ribs. The quarters are called "fores" and "hinds". In shipping and export trade, the four corresponding quarters are regarded as a carcass of beef; that is, they are sold as "straight cattle" rather than miscellaneous sides or quarters. In "car-route" and local city trade carcass beef is to a considerable extent handled as separate "fores" and "hinds".

Regular hindquarters contain 47 to 49 percent of the carcass weight and fores 51 to 53 percent, the average being about 48 percent hinds and 52 percent fores. In "exports" the quarters are practically equal in weight. Hinds are quoted about 25 percent higher than fores in the cold months and up to 40 percent

*Beef carcasses contain thirteen pairs of ribs. It is customary to number them from the neck backward.

higher in summer. The influence of season upon the price is due to the large amount of boiling and stewing pieces in the fore-quarters, which meats are both more palatable and more economical to cook during the winter season than in warm weather and consequently are in greater demand at that time.

Carcass beef which is thick and fat enough so that the entire side can be sold over the butcher's block in retail cuts is known as "block beef" or "side beef". "Cutters" are dressed cattle that are not sufficiently thick-fleshed nor fat to be entirely utilized by the retailer, but contain certain wholesale cuts (loins and ribs) which may be so used. "Canners" are those carcasses from which none of the regular wholesale cuts suitable for butcher-shop use can be obtained, and which, consequently, must be divided into smaller cuts such as boneless fresh meats and cured beef products.

CLASSES AND GRADES OF CARCASS BEEF

The classes of carcass beef are *Steers, Heifers, Cows, and Bulls and Stags*. This classification is based not merely upon differences in sex, but also upon the general uses to which they are adapted, as described in connection with each class.

Within the four classes, side beef is graded as *prime, choice, good, medium, common* and *canners*. In the markets the highest grade is sometimes termed "extra choice" or "fancy" beef; the term "fair" is frequently used instead of *medium*, and *canner* sides are often called "culls".

Grading Carcass Beef

The grade to which a carcass, side or quarter, belongs depends upon its *form, thickness, finish, quality, soundness* and *weight*.

By *form* is meant the shape or "build" of the side, its general outlines and the proportions of its different parts. Ideal conformation consists of compactness, i.e., good width in proportion to length; short shanks and neck; and full rounds, loin and ribs. It is associated more or less closely with a proper degree of thickness and is also partially dependent upon the covering or finish of the carcass. Large plates,* "hollow" loins, prominent hips, thin chucks or "rangy" loosely coupled sides are especially discriminated against. A "rimmy" side is one showing an unusual degree of curvature in the ribs, giving the side a warped appearance and corresponding to paunchiness in live cattle.

Thickness of a carcass refers to the amount of lean flesh it

*For explanation of cuts see Fig. 22, page 191.

carries. Thick-meated loin and ribs and full, compact rounds and chucks are especially essential. "Built like a cart-horse" describes the fleshing demanded in high-grade carcasses. In the case of quartered sides the depth of lean meat on the ribs is readily seen. It is true that thickness depends somewhat upon the finish of the carcass; but there is a clear distinction between thickness due to fatness and thickness due to muscular flesh. Also, quality and firmness of flesh must be considered in judging thickness. For example, carcasses of distillery cattle often have a plump, thick appearance which is deceptive in that the flesh is not firm. Only the knife can completely reveal the thickness of a side and the proportions of fat and flesh. The appearance of an uncut side often misleads the most expert dealers with regard to the actual thickness of flesh.

Finish corresponds to "condition" in the live animal; in other words, it refers to the amount and distribution of fat on the carcass, and to the quality of flesh so far as it depends upon the degree of fatness. Perfect finish involves a smooth covering of firm, white fat over the entire carcass, with the greatest depth along the back (about one-fourth inch on 500-pound carcasses, up to three-fourths inch on 900-pound cattle); a white brittle "kidney" of medium size; and a lining of fat deposited in flakes or rolls on the inner surface of the ribs. The rounds and shanks are covered last in the process of fattening, hence these parts are indications of the last degree of finish. The fat must not be excessive at any point, especially over the loin and ribs, because this indicates either an overdone condition or a tendency toward thick crusty covering without good marbling, i.e., mixture of fat thru the lean flesh. The highest quality of beef is that which contains the largest proportion of well marbled lean with the minimum of excess fat, but a certain amount of the latter is indispensable in prime beef. In the lowest grade, outside fat is entirely lacking. A carcass carrying soft, "gobby" fat sells at a discount. A "green" or "grassy" appearance of the flesh indicates a marked lack of finish; it is a watery, flabby condition which is characteristic of grass-fed cattle.

Quality in beef is so closely associated with form, thickness and finish that the term is often used loosely to cover all three points. In a more definite sense, however, quality has reference to size, color and softness of the bones, smoothness and grain of flesh, color and general appearance of carcass, and an absence of coarseness in general. A carcass may be thick, fat and of excellent form and yet fall below the highest grade because it lacks quality in one or more of the above particulars.

Quality of flesh in a carcass depends chiefly upon its smoothness, grain and color. Rough, uneven flesh detracts from the appearance and usefulness of the beef. Coarse grained, stringy, fibrous flesh is usually an indication of poor breeding, stagginess, advanced age or improper nourishment of the animal. Lack of grain and firmness, on the other hand, go with beef that lacks the age required for mature beef. Very young beef seldom has "substance" or marbling, and is high in percentage of water. It is considered by beef experts that carcasses of cattle under fifteen to eighteen months old are not generally mature enough for prime beef cuts, and those above three to four years old are usually past the point of highest quality, being too coarse in bone or grain of meat or uneven in finish. There are, of course, individual exceptions outside these limits of age.

Quality of bone is judged principally from the chine, breast-bone and ribs. (Fig. 22.) The bones should be as small as consistent with the weight of the carcass. They are also a valuable indication of the age and consequently the quality of flesh of a carcass. The "buttons" or cartilages on the ends of the chine bones (spinous processes) are soft and white in carcasses of cattle up to one and one-half or two years old, and the bones or processes to which they are attached are soft and red with blood vessels. Thereafter the "buttons" or "pearls" gradually ossify, and at three years have changed to a dark gray color but are somewhat distinct from the bone proper until about the fifth year. Similar cartilages on the breast-bone disappear thru ossification before the third or fourth year. The breast-bone, back-bone, ribs and pelvis gradually harden and whiten, especially after the age of eighteen months, and the segments of the rump bone unite, forming an apparently continuous surface. The bones of cows and heifers turn hard and white earlier than those of steers. In splitting the carcasses of old cows, bulls and oxen the chine bones are so flinty as to break and crush rather than cut, which gives the side a ragged appearance.

In color the fat should be a clear white and the flesh a bright, rich red. A "fiery" carcass is one the surface of which is spotted with highly colored blood vessels, due to incomplete bleeding when slaughtered. This indicates a similar condition within the lean and such sides usually "rib" dark. It may be due either to a feverish condition, fatigue from long shipment, pregnancy, or excitement at time of slaughter. A dark yellow fat is characteristic of Jersey and Guernsey cattle; it is also believed to be an individual peculiarity of some cattle, and to be due to the feed in some cases. It is not always an indication of poor quality but is generally associated with dark colored and poorly marbled

meat. "Spotters" are carcasses in which brown or black spots are found in the flesh, varying in size from mere specks to one-eighth inch in diameter. These spots are sometimes found on the flank and skirt (diaphragm) but usually are not visible until the side is cut open in quartering. They are usually found in choice native beef and their cause is not known. Carcasses are generally sold subject to the return or discount of those which cut out spotted or very dark. Such defects detract about 25 percent from the value of a carcass.

Soundness is considered in grading all beef carcasses, but most of all in the higher grades. A large percentage of carcasses are sold at a discount or sent to the cutting room on account of bruises, which injure both the appearance and keeping quality of the meat, altho as a rule the injured portion is trimmed off in the dressing process. Bruises are found most commonly on the hips, shoulders, and plates, these being the most exposed parts of the carcass. Such bruises are usually inflicted in shipment of cattle to market or in handling them in the stock yards. Unnecessary blows over the backs and loins of cattle cause the discounting of many carcasses which would otherwise grade high. Cattle which have been shipped long distances, such as Texas and Western range cattle, are bruised to a considerable extent, and droves of horned cattle show more carcass bruises than others, as a rule. Large brands are often visible on the carcass, sometimes sufficiently to diminish its value. "Bone-sour", which is caused by decomposition of the "joint water" of the hip-bone, is a common defect in heavy carcass beef. Especial care must be taken in the case of export beef both as to "bone-sour" and bruises, either of which, however slight, excludes a side from export trade. Over-ripe beef, which has been held in storage too long or with insufficient refrigeration or ventilation is also considered unsound. If well covered with fat it may be allowed to mold on the outside, otherwise a moldy condition indicates that the meat is tainted.

Weight is of importance in grading beef in the sense that the heavier carcasses are generally better in form, thickness, finish and quality than the lighter ones, and because different classes of retail trade differ as to the size of the steaks, roasts and other cuts which they demand. Consequently a system of grading by weight is of convenience to both buyer and seller. In shipping and export trade, carcass beef is assorted according to the following weights: (1) over 950 lb.; (2) 850-950 lb.; (3) 750-850 lb.; (4) 650-750 lb.; (5) 600-650 lb.; (6) 550-600 lb.; (7) 500-550 lb.; (8) under 500 lb. The heaviest carcasses seldom exceed 1050 pounds; the minimum weight is about 250 pounds, but comparatively few beef carcasses are sold in averages below 400 pounds.

Heifers and cows are separated into only four or five grades ranging from 450 pounds or under, to 750 pounds or over. Bulls and stags are not handled as carcass beef sufficiently to necessitate grading by weight, and the bulk of those sold in the carcass weigh 700 to 950 pounds. The influence of weight in determining the market grade of a carcass varies with different branches of the

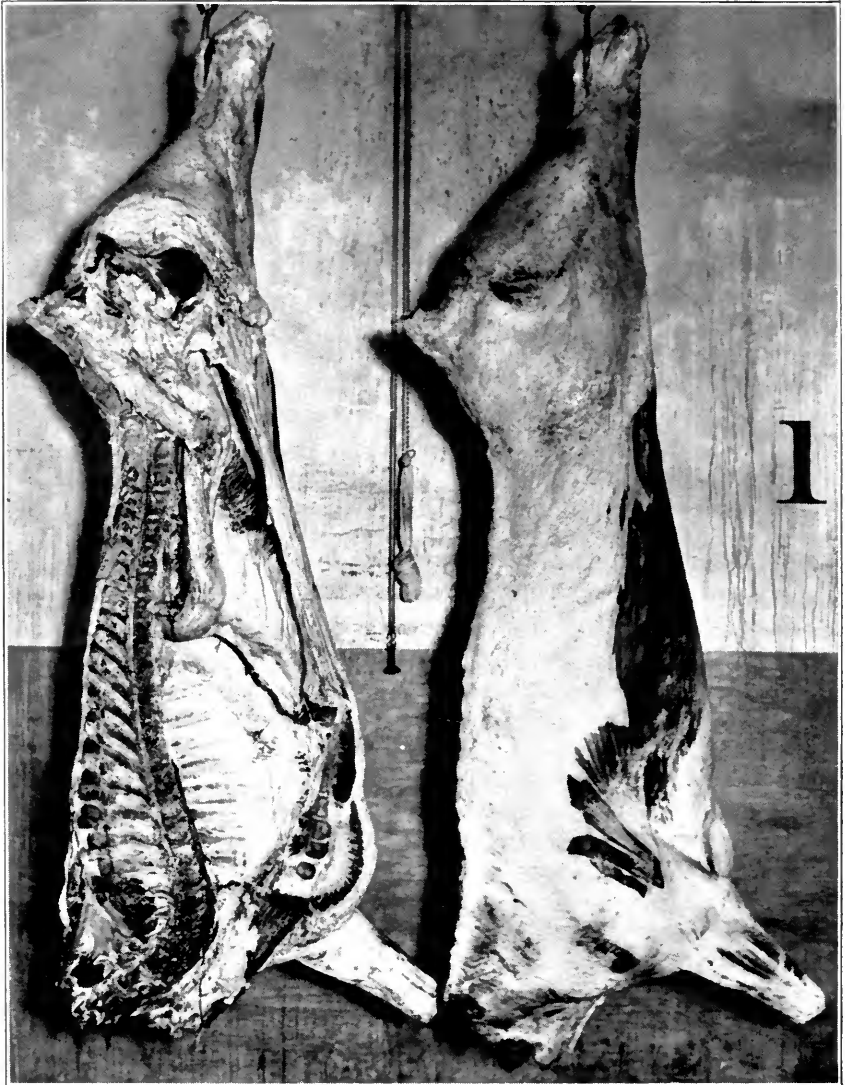


FIG. 1. PRIME STEER.

trade and with the season, as will be noted in describing the various classes of beef.

As to the relative importance of the above factors in grading carcass beef, it may be said that in the higher grades finish is particularly essential, with thickness, quality and form of about equal importance. In the medium and lower grades, finish is a minor item and quality is of less relative importance than thickness and form. Weight and soundness are more important in the higher than in the lower grades.

STEERS

Steer carcasses are identified by the cod fat, and generally by their full, fleshy rounds and loins, heavier, coarser bones, and short necks as compared with cows. They show more quality and finish than any other class, and are sold as carcass beef more extensively than any other class except heifers. The grades are *Prime, Choice, Good, Medium* and *Common*.

Prime steers ("fancy" or "extra choice") completely fill all the requirements of carcass beef described on pages 156 to 159. They are the "show cattle" of the beef trade. They weigh 900 to 1100 pounds (dressed) altho it is not uncommon to find sufficient finish and quality in carcasses below 800 pounds to grade prime. Finish is of special importance because this grade of beef supplies a trade which requires rich, tender steaks and roasts even at the expense of considerable waste tallow. The demand for a limited amount of prime beef is comparatively constant and uniform. It supplies the highest class of city, shipping and export trade. Excepting a few weeks at the holiday season, however, little distinction is made between fancy and choice beef. See Fig. 1.

Choice steers are excellent in shape and thickness but lack the high finish demanded by the most select holiday trade. They are the highest grade of dressed beef found regularly in the market, and are uniformly compact, thick and smooth. Any indications of coarseness or a marked lack of finish bar a bullock from this grade. They are most in demand from October until Lent. The bulk weigh 800 to 950 pounds. Choice cattle that are shipped or exported are handled in the quarter, while those used locally are sold chiefly as No. 1 wholesale cuts except the plates and flanks, which are largely sold as barreled beef. See Figs. 2, 4.

Good steers are somewhat deficient in either finish, thickness or form, but at the same time have sufficient covering to show that they have been fattened on a grain ration. Or, they may be thick and well finished but coarse in bone and flesh, or show too much age. They commonly weigh 650 to 850 pounds. Steer carcasses

weighing 750 to 800 pounds generally sell lower than heavier cattle of the same quality and finish because they are too light for the jobbing or hotel trade and too heavy for the retailer. This grade of beef is used largely in the shipping trade, and is also sold to hotels and restaurants that cater to commercial rather than fashionable patrons. See Figs. 3, 4.



FIG. 2. CHOICE STEER.

Medium steers are so graded because of a deficiency in any or all of the points mentioned in reference to the higher grades, but to a more marked extent. As a rule they are about as fat as good steers but many have no covering over round or chuck, and a common feature of the grade is coarseness of quality and conformation. Some slightly staggy cattle are included. Heavy plates, hollow loins, prominent hips and shoulders, light rounds, long necks, dark color, "grassy" flesh or other equally objectionable points are found in this grade. They are the lowest grade of bullocks that are ordinarily sold in the carcass, and the majority of the supply is sold to retail markets. The wholesale cuts of medium

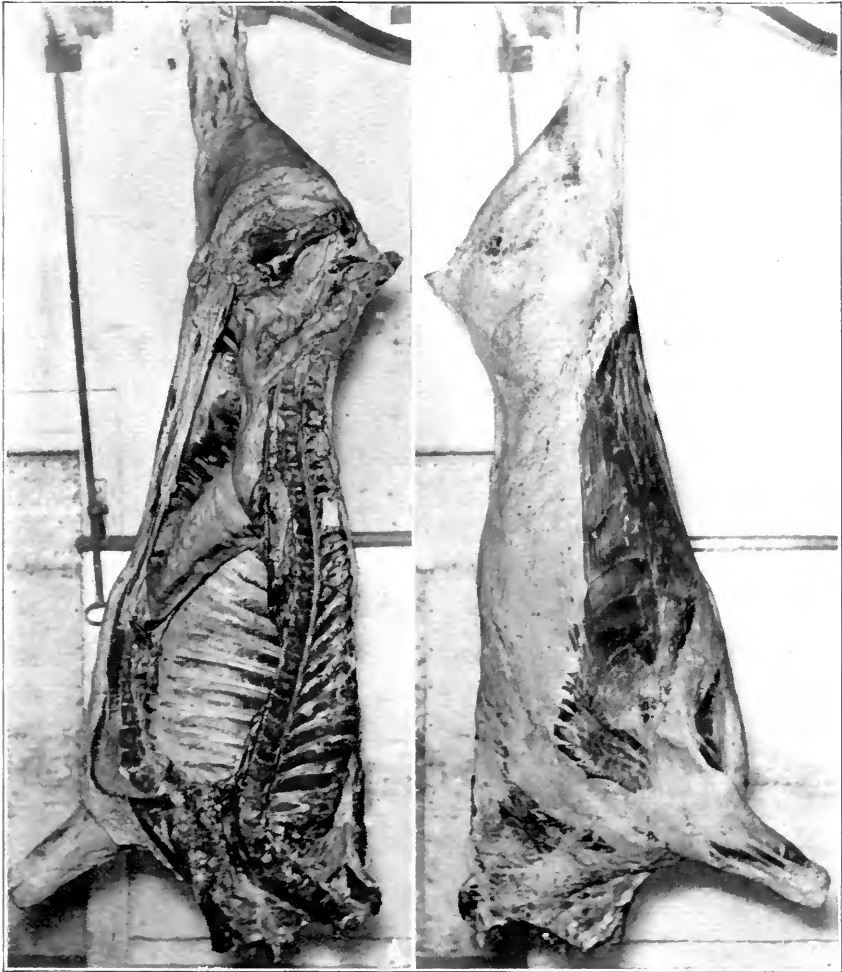


FIG. 3. GOOD STEER.



FIG. 4. A, CHOICE STEER. B, GOOD STEER.

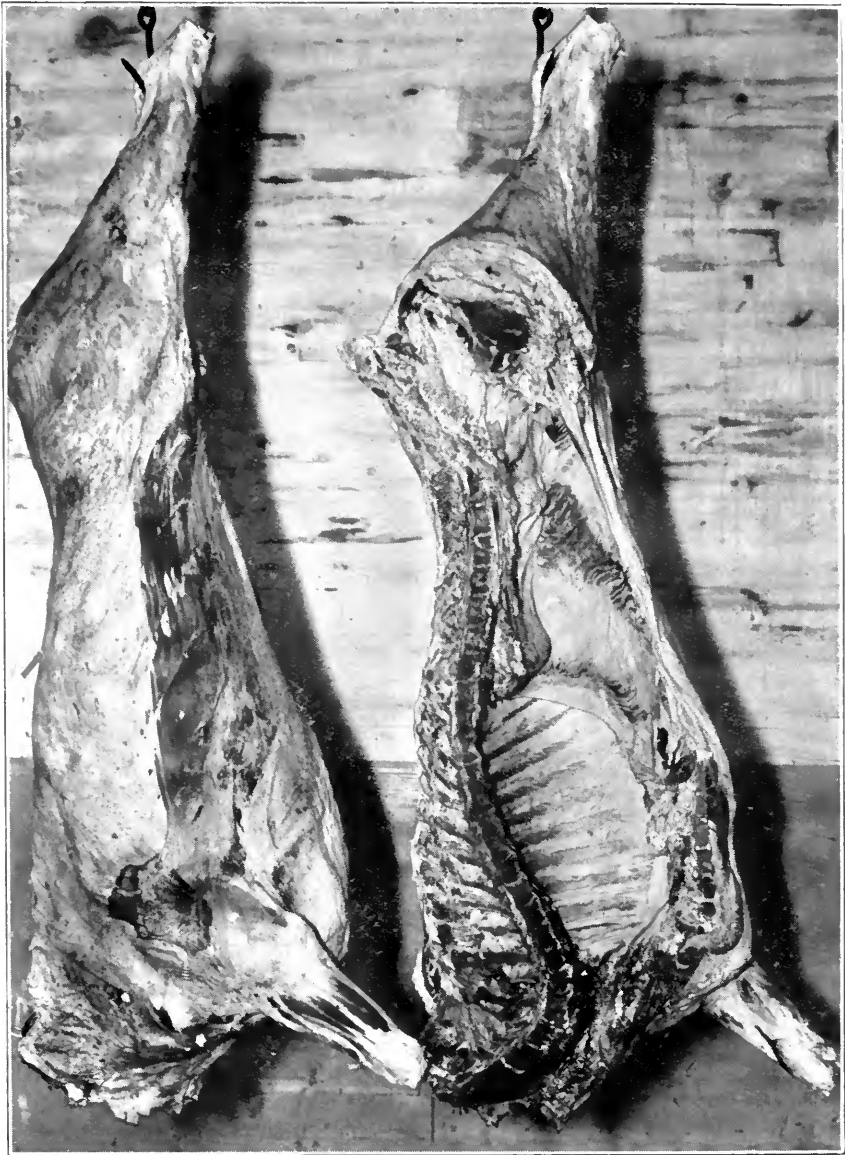


FIG. 5. MEDIUM STEER.

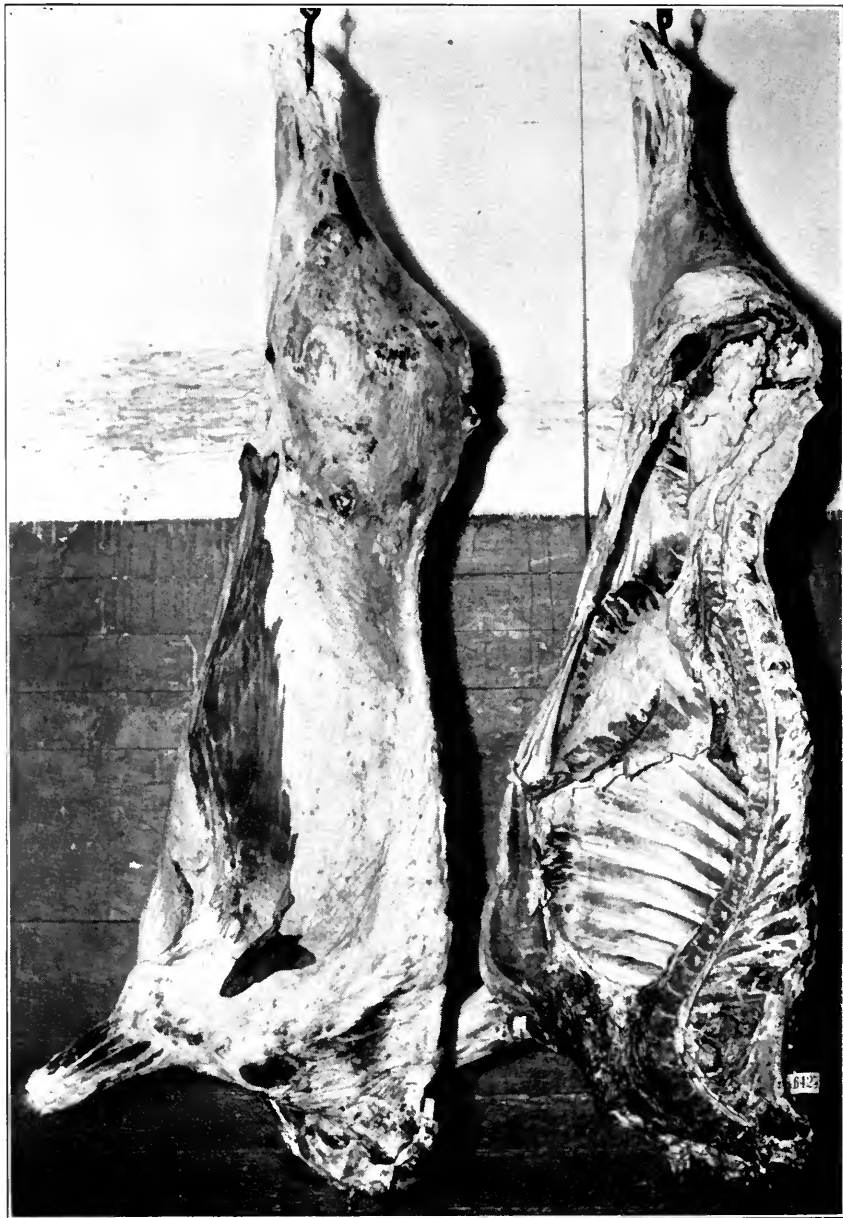


FIG. 6. COMMON STEER.

Western steers are frozen in large quantities during the fall season. The general run weigh 550 to 750 pounds and some plain carcasses are included up to 900 pounds. See Fig. 5.

Common steers have but little outside fat and kidney suet. They are angular, long in shank and neck, and generally dark colored or "grassy" in flesh. Many sides which are disqualified from higher grades by reason of bruises, stagginess, "off color" (fiery, spotted or yellow), or other defects, are sold as common. (Fig. 6.) They average 450 to 600 pounds. When sold as carcass beef they are taken by jobbers or retailers who supply a cheap trade. Ordinarily, however, they enter the trade as wholesale cuts and barreled beef. They are the lowest grade of steer sides with the exception of an inconsiderable number of culls used for canning purposes. The latter are comparable in quality with common and canner cows. The proportion of common carcasses is much smaller in the steer class than in others because thin steers are extensively shipped from the market to the country as feeders, whereas nearly all cattle of other classes sold at the large markets are slaughtered.

HEIFERS

Heifer carcasses are distinguished from steers by the bag (udder), and as a rule they have smaller bones, slightly more angular rumps, less development of lean flesh, and average somewhat less in weight. While the percentage of carcass weight in loins and ribs is frequently as high in heifers as in steers, the greater thickness of lean meat in those parts of the steer is greatly to his advantage. Further, the tendency in heifer beef is to carry the fat more largely in the form of kidney suet or "gobby" fat than steers in the same degree of finish; they are also flatter in the loin, fatter in the plate and more "necky" than steers. Accordingly heifer beef is rated lower in the market than steers of corresponding grades. The average heifer carcass is lighter in weight and lower in grade than the average steer. Experts are not agreed as to the comparative quality of the two classes of beef, and it may be said that differences in color, texture and "substance" of flesh are not marked. The prevailing notion that heifer beef is in relatively higher favor in England than in America is true only so far as the best grades are concerned. Heifer sides differ from cows in their immaturity, indicated by softer bones and brighter color of flesh; in shape, especially their less angular rumps, fuller loins, and shorter necks; and in their smoother finish and smaller, firmer bags. Heifers are sold principally in the side or quarter, owing to the demand for this beef for retail butcher trade. A considerable proportion of this class are *yearlings* (page 186), averaging 400 to 600 pounds. The regular run of heifers weigh

350 to 750 pounds, and are graded *Prime*, *Choice*, *Good* and *Medium*.

Prime heifers are selected according to practically the same requirements as prime steers, with special reference to full loins and rounds, compact form, smooth finish, short neck and light udder. They seldom have quite the thickness of flesh found in steers. The few carcasses of this grade which appear in the mar-



FIG. 7. PRIME HEIFER.

kets are usually seen in lots of choice and prime bullocks, in which case they may sell at a uniform price with the latter. When sold separately they are discriminated against by most American dealers, on the ground that the steaks and roasts do not cut out as thick in the lean as those cut from steers and that the proportion of waste fat is greater. Since this discrimination is not made in British trade, owing to its greater demand for fat steaks and roasts, prime and choice heifer carcasses are frequently exported. See Fig. 7.

Choice heifers are similar to choice steers except in the points mentioned in the preceding paragraph. As a class they are imperfect in finish and quality rather than in form and thickness as compared with prime heifers. Like the latter, they must be strictly "maiden" heifers; that is, the carcass must bear no evidence of pregnancy. They are sold to city and country retail dealers, shipped east, and occasionally exported to Great Britain. See Fig. 8.

Good heifers. These are sides that are clearly above the average of the class but lack either the finish, thickness or conformation, or all, required of a choice side. They must have sufficient covering and kidney fat to show that they have been fattened on a grain ration. Local retail dealers use a great deal of this grade of beef and much of it is shipped to the smaller cities. See Fig. 9.

Medium heifers. The medium or average heifer carcass is plain in conformation and deficient in flesh and finish. A marked deficiency in either of the three points renders a side *medium* which would otherwise grade *good*, and many of this grade are of the heavy weights (700-800 pounds) and somewhat "cowish" in general appearance. They are the lowest grade of heifer sides that can be entirely sold over the block of the ordinary retailer, and are to some extent made into wholesale cuts before being sold by the killer. This beef supplies the second class trade of which most retailers have more or less, and is used for the bulk of the trade in cheaper markets. See Fig. 10.

Common heifers. Common heifers have little covering of fat and only sufficient thickness of flesh to be used as cutters. This grade also includes many heavy heifers which are still more "baggy" and "cowish" than medium heifers. In fact little distinction is made between common heifers and cows as the differences are much less apparent than in higher grades, and in many cases are quite immaterial. (Fig. 11.) Very few heifers are found among canners, and those that are so found are well represented by the illustration and description of canner cows.

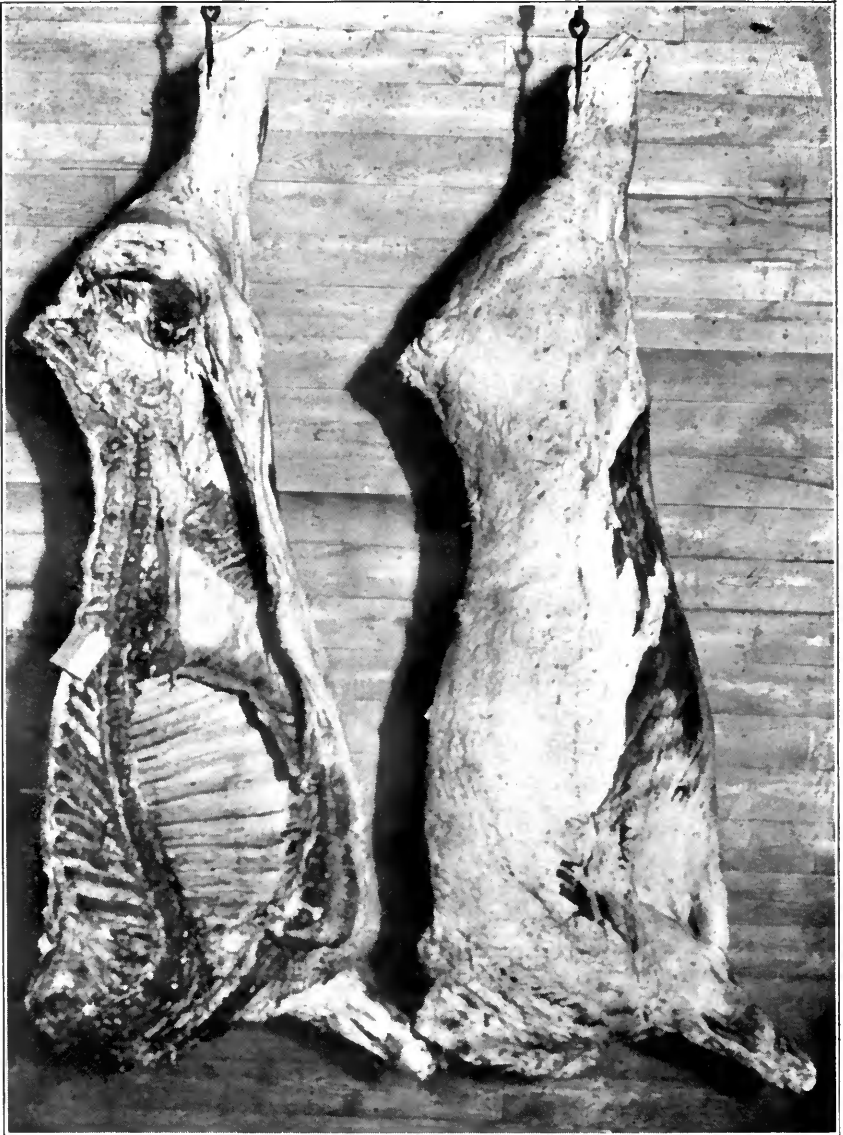


FIG. 8. CHOICE HEIFER.

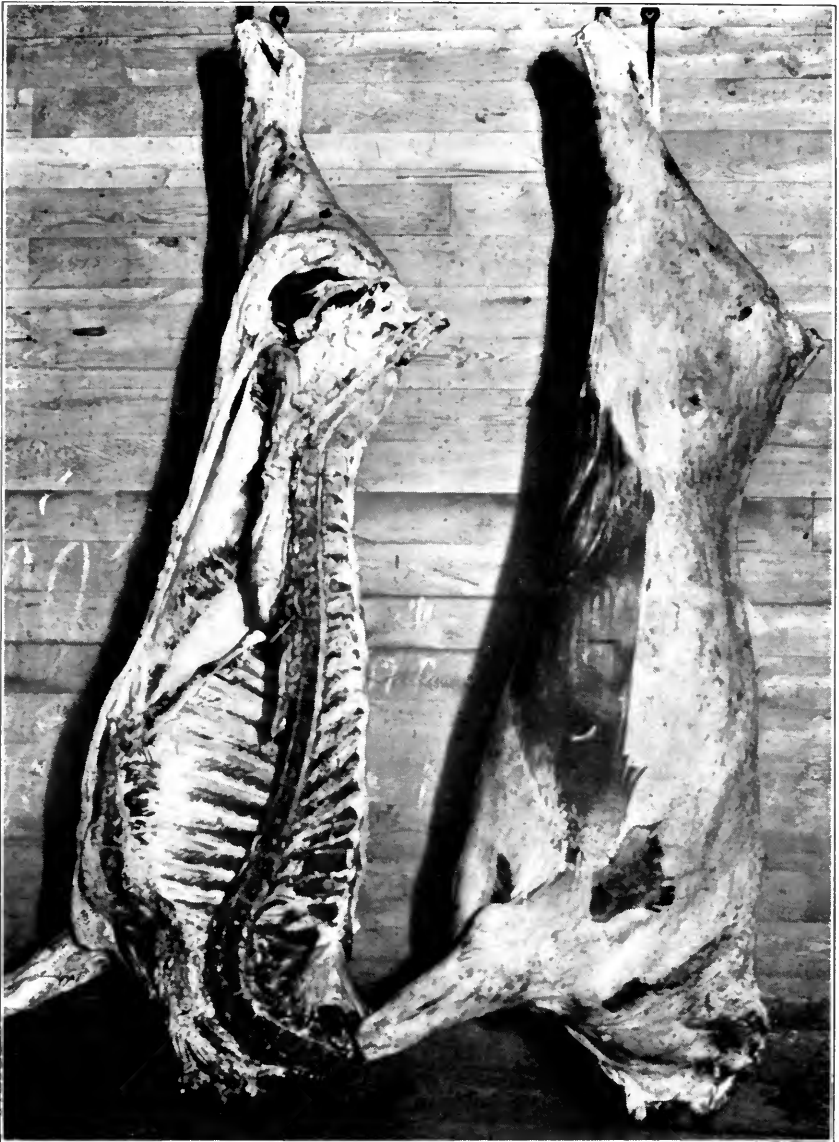


FIG. 9. GOOD HEIFER.



FIG. 10. MEDIUM HEIFER.

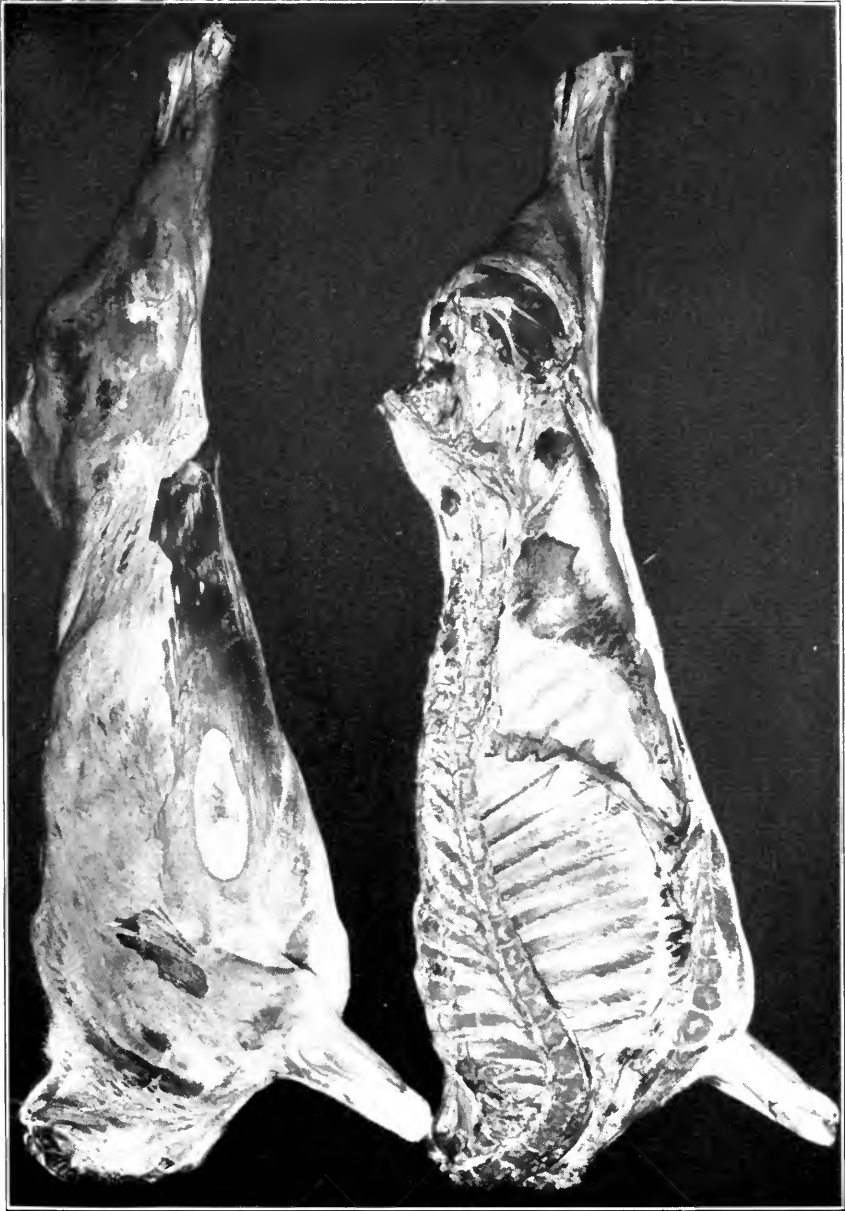


FIG. 11. COMMON HEIFER.

COWS

The angular form, long neck, hard, white bones and lack of thickness of the majority of cow carcasses make them easy to distinguish from other classes of beef. The bag is trimmed off as closely as possible in dressing cows but it is generally large and "baggy" enough to indicate the class of the carcass. The bones are also hard and therefore do not split as smoothly as heifers or steers, especially at the chine and loin. Fat cow carcasses often carry their tallow as kidney fat and in bunches on the back and rump rather than an even covering; and the flesh is seldom as well marbled as that of heifers or steers. Fat is especially important in cows because such beef generally requires "ageing" or ripening to render it tender, and good covering is essential for this purpose. A large percentage of the carcasses of this class are cutters and canners, with a correspondingly smaller proportion suitable for "side beef". Cow sides which have the amount of fat required in prime steers and heifers are as a rule either crusty or lumpy, so that no prime grade is recognized in the markets. The grades are *Choice*, *Good*, *Medium*, *Common* and *Canners*. Choice cows average 600 to 900 pounds, canners 250 to 500, and other grades accordingly. Many of the heavy weights, however, are graded lower than choice on account of waste fat.

Choice cows have as much fat as choice heifer sides but are not usually as good in shape nor thickness, the loin being flatter, neck and shanks longer and rump more prominent. They are less numerous than the same grade of heifers, and the few that come into the markets are seen mainly during the fall and early winter. Too much age, lack of loin and rib covering, lumpy fat and a heavy bag are defects each of which bar many carcasses from this grade. Choice cows are taken in the carcass by a good class of retail trade, and are also cut up to quite an extent in wholesale markets for No. 1 loins and ribs. See Fig. 12.

Good cows. This grade is above the average of cow sides in general quality. Deficient finish is found in all cow beef grading below *choice*, but kidney fat and outside covering are not entirely lacking in either the good or medium grades. Good cow sides are chiefly used for the cheaper trade of retail markets. See Fig. 13.

Medium cows. While these carcasses have the quality and covering necessary in a low grade of dressed beef, they are better adapted to the cut beef trade and are generally so used. Medium cows must have a moderate amount of kidney fat and a slight covering over the ribs, loin and rump. Many of them are plainly

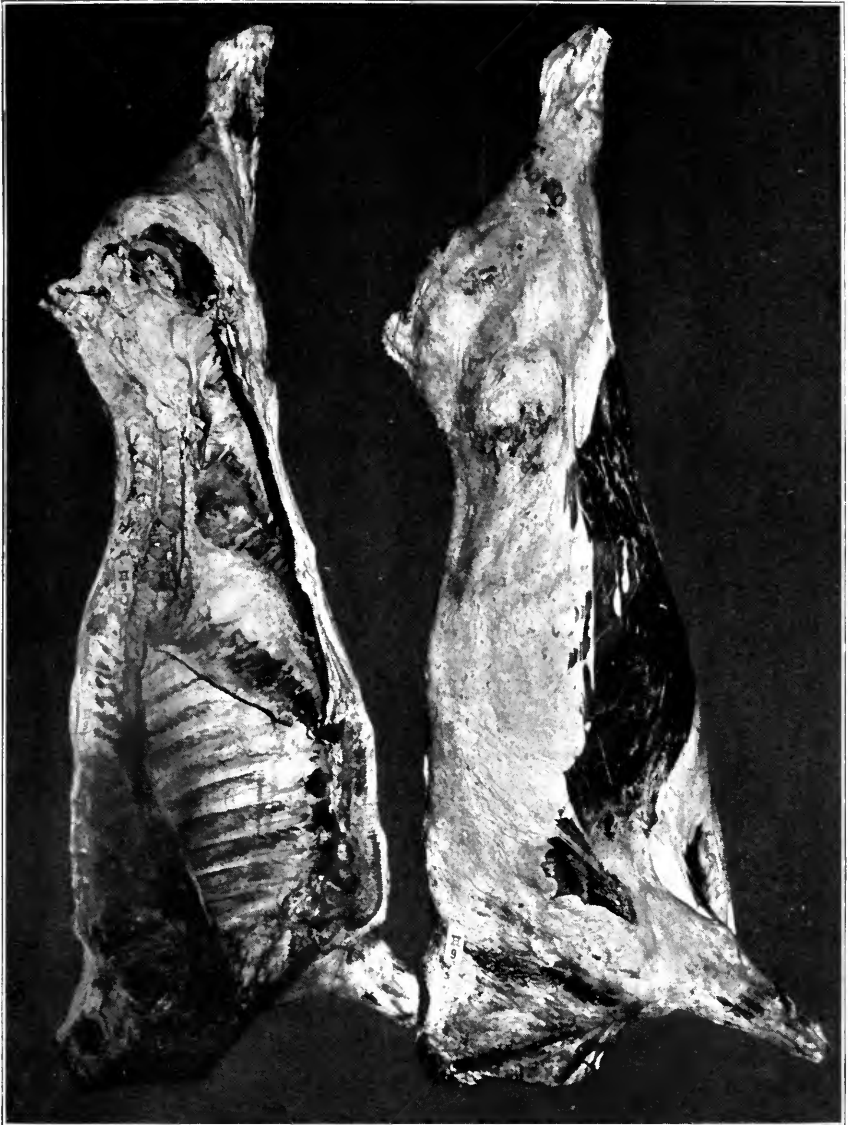


FIG. 12. CHOICE COW.

deficient in thickness of flesh, especially over the loin and ribs, are rougher about the hips and rump, lighter in the rounds and longer in the neck than good cows. See Fig. 14.

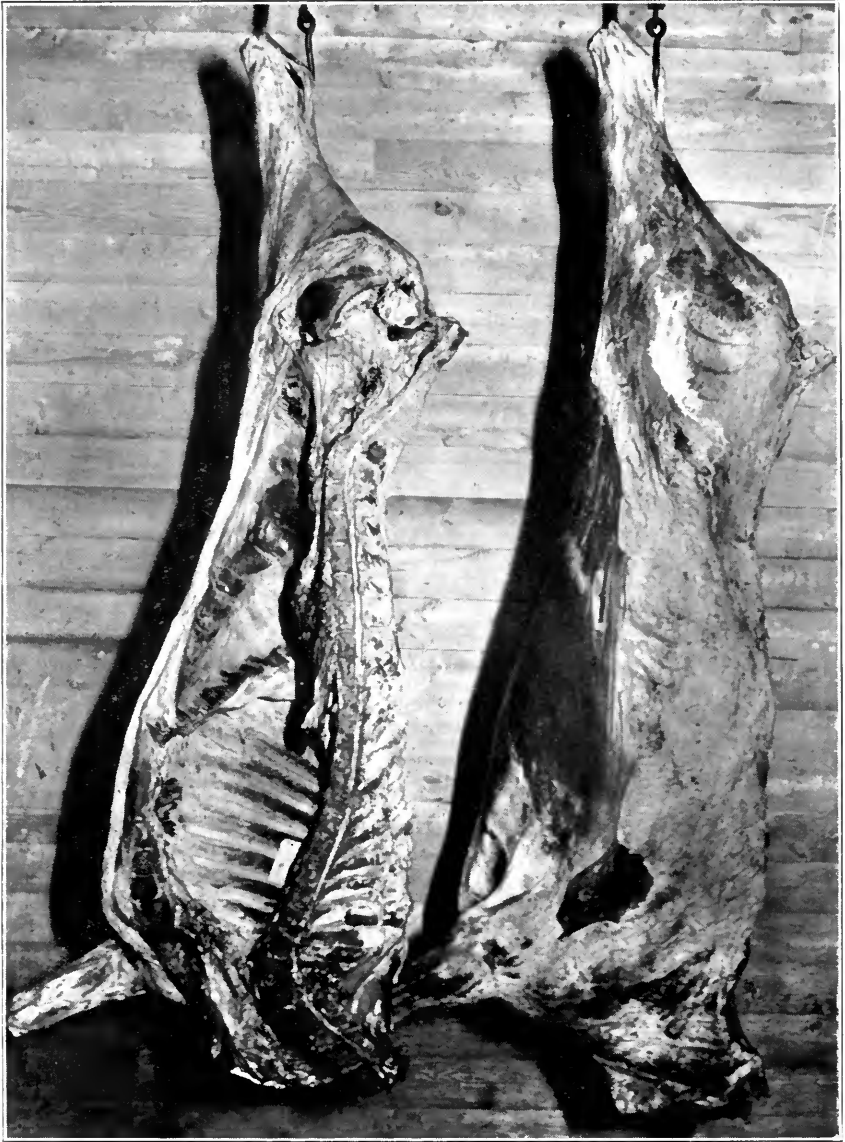


FIG. 13. GOOD COW.

Common cotes. These are inferior in conformation to steers of the same grade, being on the "shelly" order, i.e., poorly fleshed, bare on the ribs and warped in shape, showing the effects of repeated pregnancy. They are very prominent at hips and rump, nearly devoid of covering and kidney fat, white and flinty in bone and decidedly wanting in thickness. This grade also includes a few carcasses that are medium to good in thickness and shape but

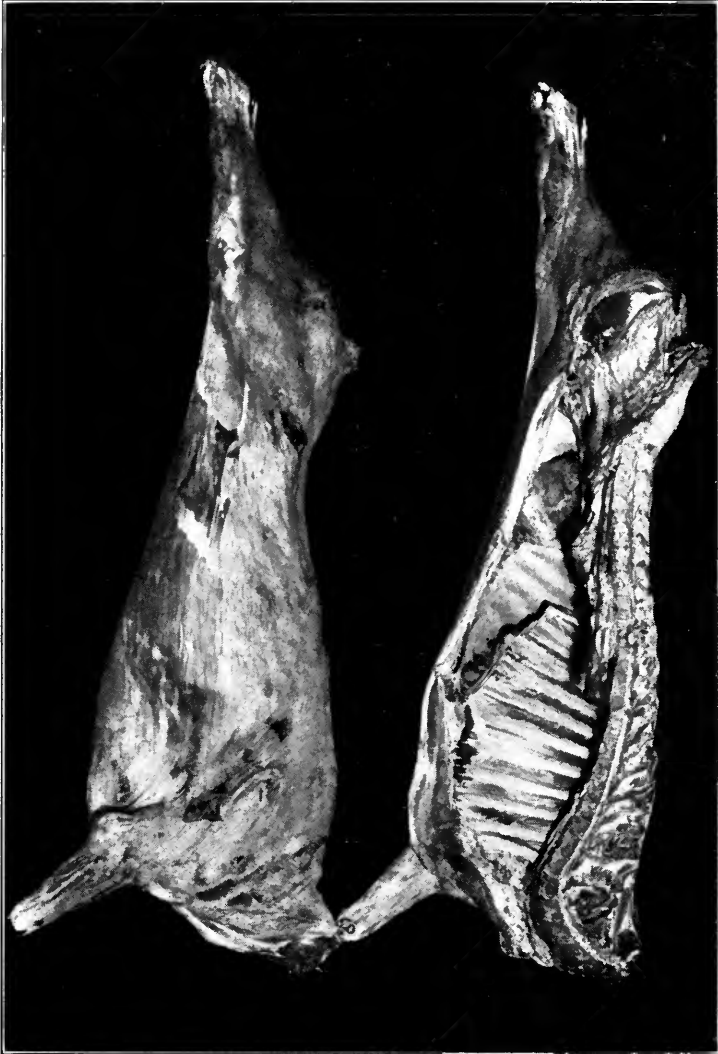


FIG. 14. MEDIUM COW.

inferior in color, finish or general quality. They are used principally as cutters and for stripped and frozen cuts, barreled beef, etc. See Fig. 15.

Canner cows are the lowest grade of this class, and make up the bulk of the beef used for canning purposes. Typical canner sides have no covering, no kidney fat, and in most cases only sufficient flesh to hold the bones together, so that the shape of such carcasses is of the most inferior order. The flesh is generally very

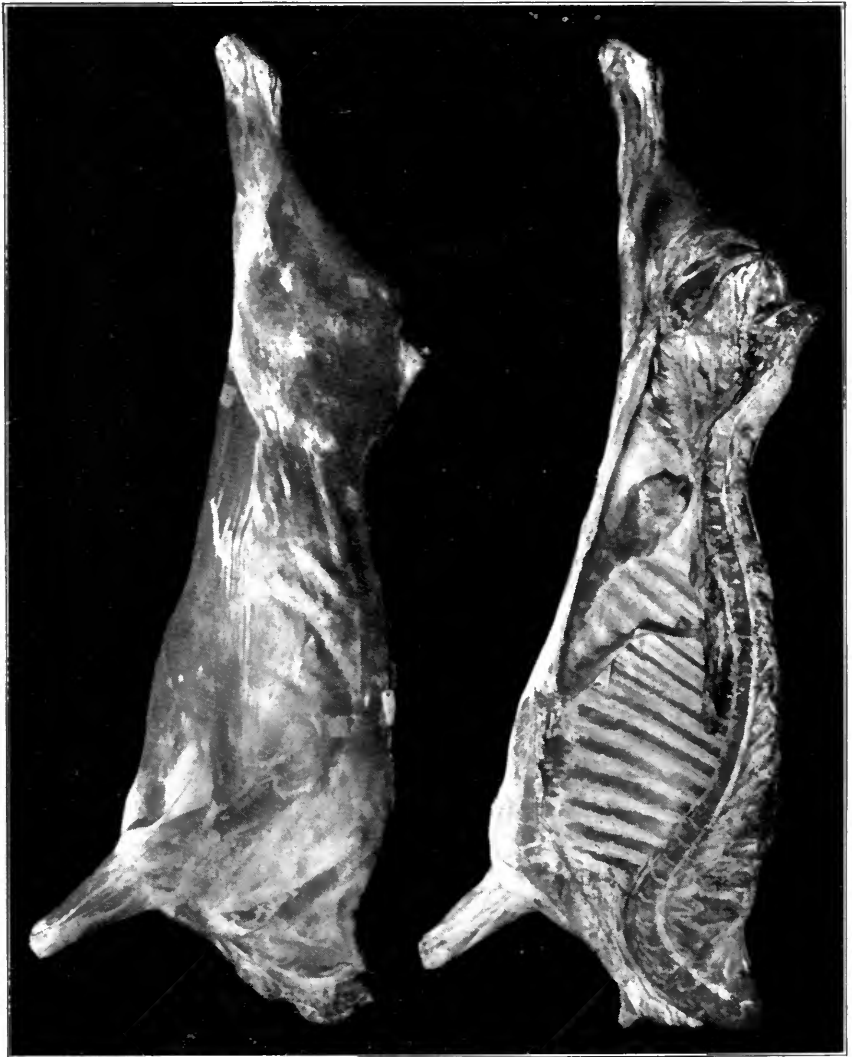


FIG. 15. COMMON COW.

dark in color. This grade, as well as the one above it, also contains many bruised sides, some of which are otherwise medium. About one-third of the carcass is used for canning and sausage purposes, and the remainder is "stripped" and sold in the form of boneless fresh beef cuts and barreled beef. See Fig. 16.

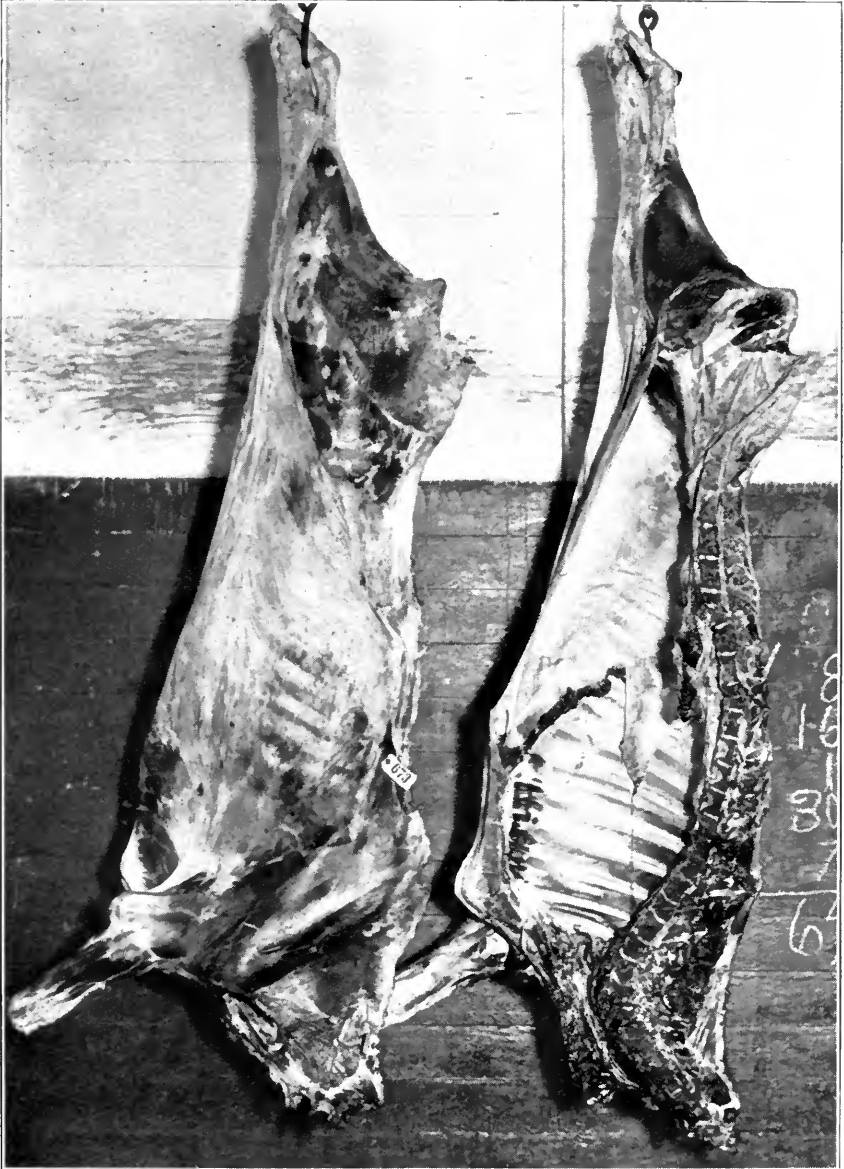


FIG. 16. CANNER COW.

BULLS AND STAGS

Dressed bulls are easily recognized by the prominent neck, heavy shoulders, thick rounds, dark color, coarse-grained flesh, and the absence of cod fat. Rough conformation and hard bones are also common characteristics of bull sides. Bruises, bad color, and "bone-sour" account for the low grade of many bulls and

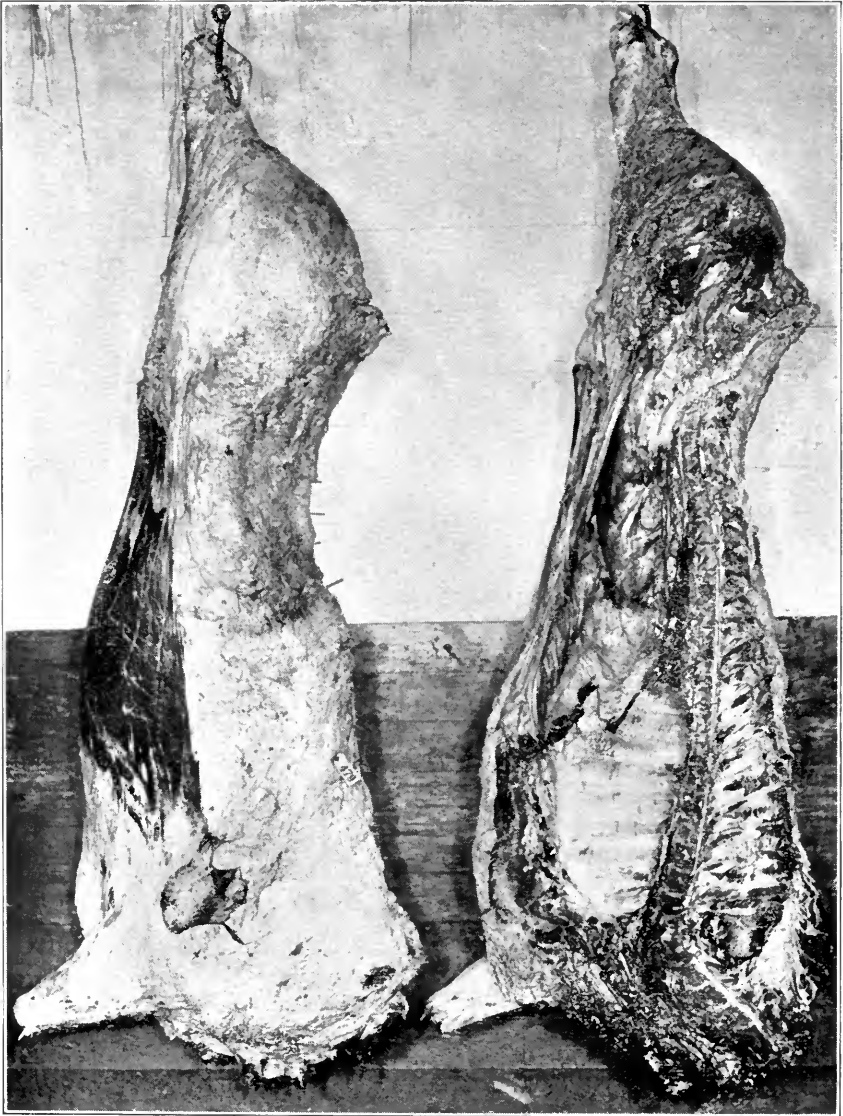


FIG 17. CHOICE BULL.

stags. Many stags approach steers in form, quality and finish, while others are difficult to distinguish from bulls. Altho various grades of beef are found in this class, the proportion of medium and lower grades is much larger than in the steer and heifer classes, and comparatively few bull sides are adapted to the dressed beef trade. As a class bulls have dark coarse flesh with no marbling, which when made into sausage, absorbs a large percentage of water, and when smoked shrinks but little. Hence the majority of bull carcasses in the market are partially used for sausage, and the rounds made into smoked beef hams. The class is for the most part deficient in covering and finish, tho in thickness of flesh bull sides as a class are decidedly superior to cows. The regular grades are *Choice*, *Good*, *Medium* and *Common*. In weight, choice carcass bulls average 900 to 1200 pounds, common bulls 550 to 800, and other grades in proportion, tho in some cases the grade is quite independent of the weight.

Choice bulls resemble good to choice steers in thickness, color and maturity, but are heavier in neck and rounds, and the finish is never equal to that of steers of choice grade. Occasionally, however, a choice stag carcass is seen which is very difficult to distinguish from a steer. 700 to 900-pound bulls of choice quality are used by some retail butchers for their cheap trade, and can be so used to best advantage during the colder months, when boiling meat is more in demand than in the warm seasons. Even this grade of bulls, however, can ordinarily be cut up with more profit to the wholesaler than can be realized by selling them in sides or quarters, because wholesale cuts do not bear as much evidence of the sex and general quality of the carcass as beef in the side. There is also a considerable export trade in choice and good carcass bulls of heavy weights. See Fig. 17.

Good bulls. This grade is distinguished from choice bulls by deficiencies in quality, conformation and color. To grade good, however, a bull carcass must be moderately fat and smooth and not too coarse nor dark-colored in flesh. A very small proportion of good bulls sell in the carcass to the cheapest dressed beef trade but they are principally utilized for beef cuts, both "straight" and boneless, and the cheaper parts of the carcass for sausage and smoked or barreled beef. See Fig. 18.

Medium bulls. Sides of this grade often have the muscular thickness required in side beef but lack sufficient covering of fat. They are rougher in appearance than good bulls and are usually characterized by coarse flesh, hard white bones, and very heavy necks and rounds. Some of the ribs and loins go to a cheap class of restaurant trade, and the other parts are largely used as barreled and smoked beef. When common bulls are scarce medium grades are more largely used for cured beef products. See Fig. 19.



FIG. 18. GOOD BULL.

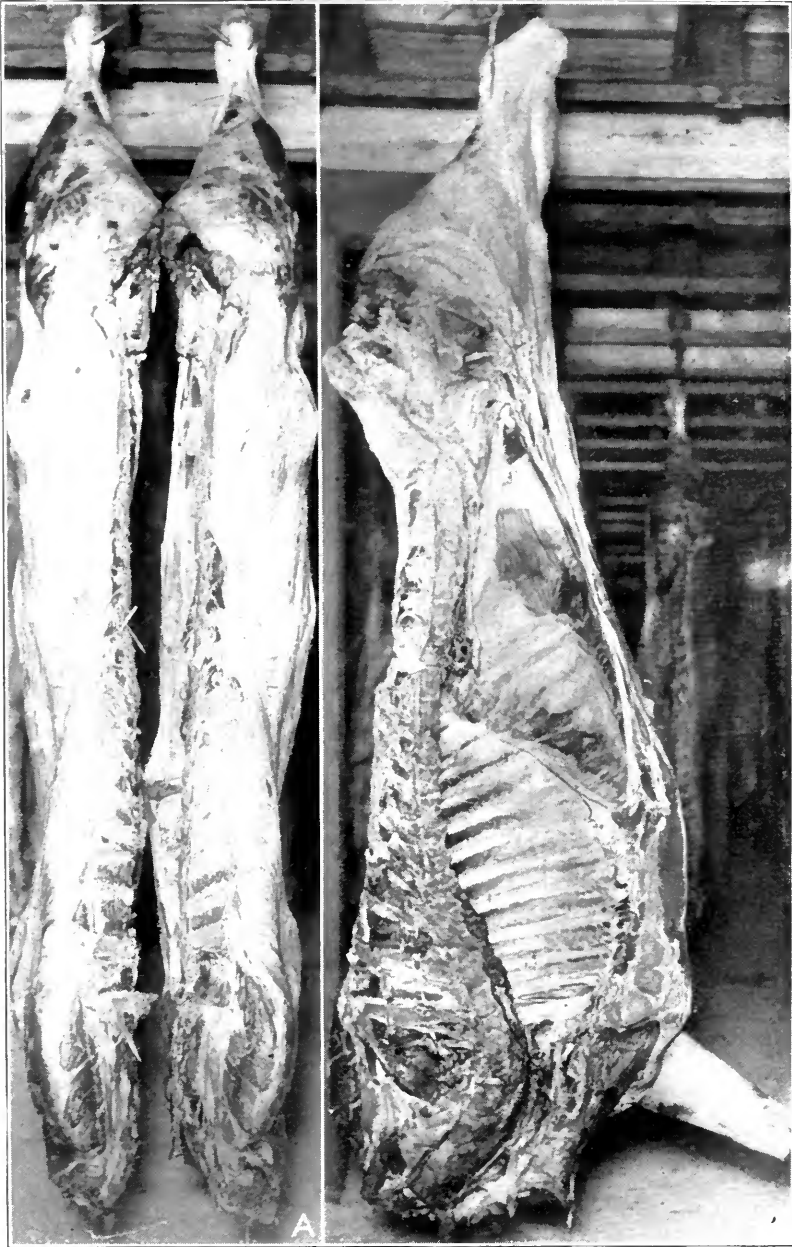


FIG. 19. MEDIUM BULL.

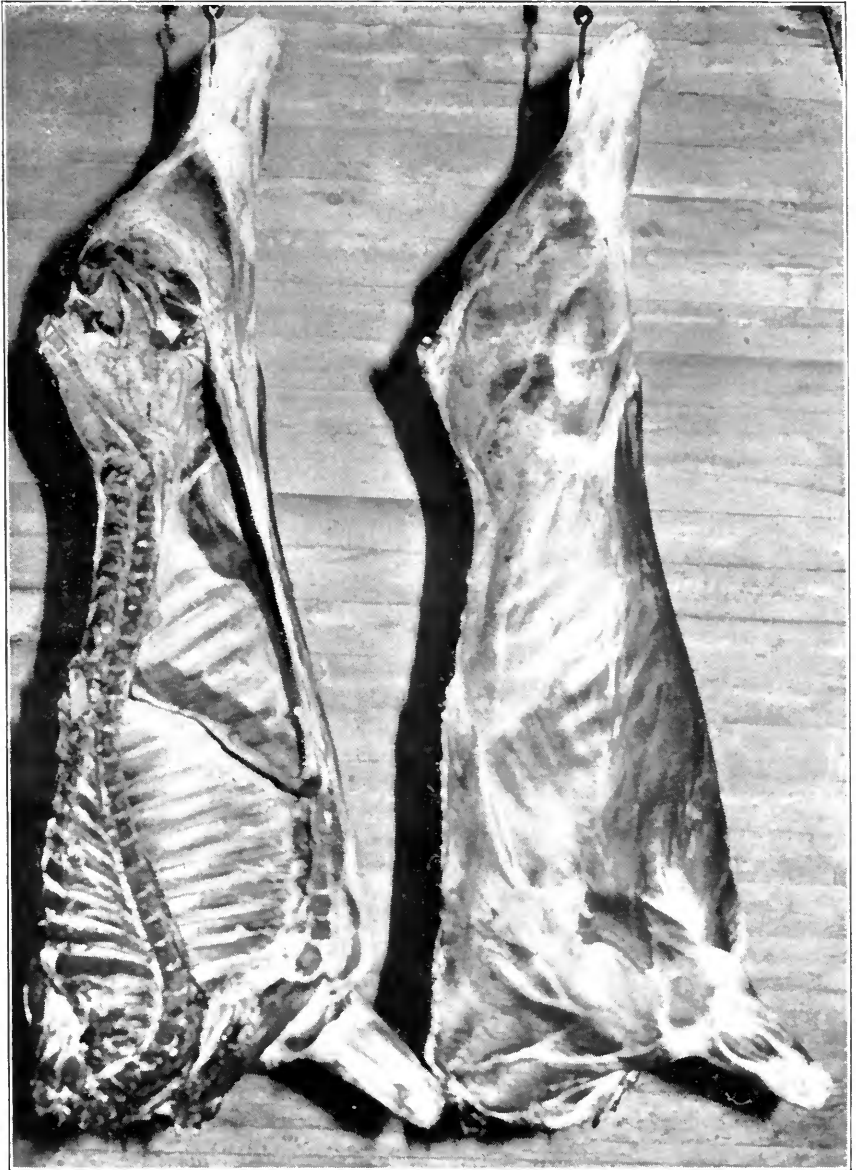


FIG. 20. COMMON BULL.

Common or Bologna bulls. Bull carcasses which have no covering of fat and are plain or rough in form but still fairly thick fleshed are known as *bolognas*. They include many bruised sides, and most of this grade are very dark in color and flinty in bone. The lean and dry nature of these carcasses adapts them to the manufacture of bologna sausage and dried beef. A considerable proportion of such sides also yield ribs and loins which can be sold straight or stripped. They average 600 to 900 pounds. See Fig. 20.

A small percentage of the supply of dressed bulls and stags grade as canners. The description of canner cows applies in all essential points to the corresponding grade of bulls, and their use is similar.

"NATIVE", "WESTERN" AND "TEXAS" BEEF

In connection with the preceding classification, carcass beef may be further designated as "Natives", "Westerns" or "Colorados", and "Texas". These terms are used in the same sense, tho scarcely to the same extent, in the beef trade as in the live cattle market. The distinct differences which formerly separated them have become much less marked in recent years owing to improvement in quality of beef produced in the West and Southwest. It must be understood that these names do not apply to all beef marketed from the section or state indicated. They are sufficiently distinct, however, to give each term a reasonably definite meaning in market circles; and they are sometimes applied even to wholesale beef cuts (page 194).

"Native" carcass beef differs from "Western" principally in shape, finish, thickness and age. It is fatter and firmer in flesh, showing the effect of grain feeding; more compact in form, shorter in shanks and neck, thicker fleshed in loin, ribs, rounds and chucks, more mature in proportion to age and much better in marbling and general quality. Natives consist chiefly of medium to choice steers, heifers and cows of the heavier weights, but they include all grades of beef and are used either as dressed beef, cutters or canners. They make up over 85 percent of the carcass beef trade at Chicago.

"Westerns" or "Colorados" are carcasses that are comparatively "rangy" or loose-coupled in form, "grassy" or "green" in appearance, with coarser-grained flesh, larger, whiter bones, lighter kidneys, wider plates, more prominent shoulders and lighter, longer rounds than Natives. They do not run as fat as Natives, and most of them are "hipped" or bruised on the plates and ribs. The flesh just underneath the shoulder blade is almost invariably dark colored, as is observed when the chuck is taken off. The

rump bone is generally thicker and more prominent than in Natives. Heavy, well-finished "Colos" or "Collies", as they are called by salesmen, frequently yield loins and ribs that can be substituted for those of Natives. By far the greater proportion of carcasses in this class are medium and common grades, with a considerable percentage of cows, and a smaller proportion of heifers than in Native cattle. Heavy steers (750 to 1000 pounds) of this description are usually termed "Colorados" and the 500 to 750-pound steers "Westerns". Western cows weigh 450 to 700 pounds. Most spayed heifers are Westerns; they are a very small percent of the number slaughtered, and little or no difference in price is made as compared with open heifers. The supply of Westerns is confined principally to the period from July to December, which is known in the beef trade as the "cattle cutting season". They are sold to a considerable extent as dressed beef, but are also cut up and stored in freezers in the form of No. 2 and No. 3 loins, ribs, rounds and chucks; also strips, rolls, clods, tenderloins, etc., and to some extent in quarters. These cuts are sold from the freezers mainly from February to June, when medium and lower grades of fresh beef are scarce. The plates, flanks and rumps are packed as barreled beef, and the rounds as "beef hams". "Colorado" beef constitutes only about 10 percent of the trade.

"Texas" beef refers to light-weight carcasses, more deficient in form and finish than "Westerns", and more "grassy" or "washy" in flesh, together with hard bone and dark color, showing considerable age. Many "Texas" sides are severely bruised due to long shipments of the live cattle. Large scars, resulting from branding the hide too deeply, are visible on the carcasses in some cases. They grade from canners to medium or good. Only 5 percent or less of the annual supply at Chicago consist of "Texas" beef, most of this beef being handled at Kansas City, St. Louis and Ft. Worth. It is in season from June to October. A larger proportion of this beef than of "Westerns" is cut for freezers. Both as carcass beef and as beef cuts it is taken mainly by small retail markets. The supply consists principally of three- and four-year-old steers and aged cows averaging as follows: light steers, 500 lb. or less; medium steers, 500-600 lb.; heavy steers, over 600 lb.; light cows, 400 lb. or less; medium cows, 400-500 lb.; heavy cows, over 500 lb.

"YEARLINGS", "BUTCHER", "KOSHER" AND "DISTILLERY CATTLE".

"Yearlings" are carcasses of young steers and heifers of 400 to 700 pounds dressed weight, with sufficient quality and finish to be used as block beef. Their immature age is indicated by light colored flesh and fat, and bones that split soft and red, especially

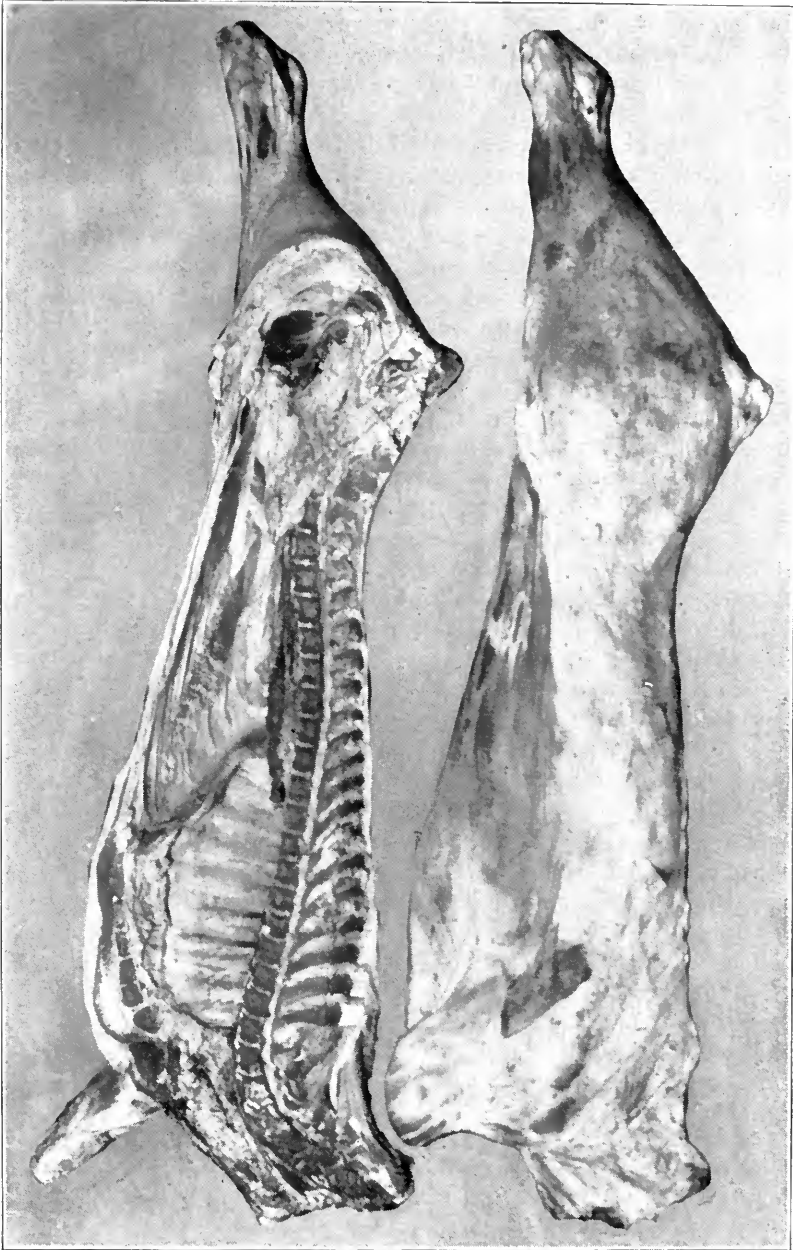


FIG. 21. YEARLING (GOOD STEER).

the chine and brisket. They are graded *choice*, *good* and *medium*, and seldom have sufficient finish or maturity to be termed *prime*. The term *yearling* is applied more especially to good and choice young carcasses weighing 450 to 650 pounds. Thickly fleshed loin and ribs, short, compact body and high finish with one-fourth to one-half inch of fat on the back and some covering on the chucks and rounds are important points in choice yearlings. These cattle are in special favor with retail dealers who supply family trade, owing to the fact that they contain small but tender steaks and roasts with a small proportion of fat. See Figs. 7, 21.

"Butcher" Cattle, as the term is applied to carcass beef, are those which are suited to "butcher shop" trade. The typical retail meat market requires carcasses from which can be cut 1 to 1½-pound steaks and 4 to 6-pound roasts with no waste fat and of quality commensurate with a moderate price. The grades of carcass beef which yield such cuts are heifers, steers and cows of good, medium and common grades, averaging 400 to 700 pounds dressed weight. For the better class of trade, good and choice yearlings, especially heifers, are most in demand. Texas steers of the heavier weights are also used. The bulk of the city butcher trade, however, is supplied with light steers and heifers of medium to choice grades. Cows are largely cut up or sold to small retail markets.

"Kosher" cattle are dressed beeves that have been slaughtered, inspected, cleansed and labeled in accordance with Jewish rites, *kosher* being the Hebrew word for *clean*. The throat is cut without stunning the animal, the vital organs are specially inspected, and the carcass washed and labeled under the supervision of a rabbi. If not used within three days, the carcass is rewashed, and must be washed each three days until the twelfth day after slaughter, when it is no longer "Kosher". Only the fore quarters are used by orthodox Jews, and the principal grades of cattle used for Kosher beef are medium to choice steers, cows and heifers. This trade is confined almost entirely to large cities, especially New York and Chicago. Under the restrictions imposed by Kosher rules, it is impracticable to ship this beef to eastern cities from Chicago and it is therefore a local trade, the eastern supply being shipped on foot.

"Distillers" are steers, bulls and stags that have soft, "puffy", "washy" flesh together with the "high color" that is characteristic of cattle fattened on distillery-slops. They are thick-meated and fat, but the flesh does not become as firm after chilling as that of corn-fed beef and the fat does not "set" as well owing to the soft feed and close housing employed in fattening and the consequent tendency toward a feverish condition of the carcass. The surface

fat has a smooth, glossy, yellowish appearance. On cutting the fore quarters the flesh along the shoulder blades appears very dark. Distillers consist principally of good and medium steers and medium to choice bulls averaging 700 to 900 pounds. They are best adapted to the hotel and restaurant trade of large cities owing to their heavy weight, and a large proportion of the supply is shipped east. They are found in the market from April to June and a few thruout the summer months.

SHIPPING AND EXPORT BEEF TRADE

The fresh beef trade of eastern cities draws upon Chicago for all grades of carcasses described in the foregoing outline, but principally steers, heifers and cows of medium to prime grades. The demand in each city is as varied as the population, and with improved transportation and refrigerating facilities any grade of fresh beef can be delivered in good condition. Certain cities, however, are characterized by special demands which are recognized by the trade. Boston is the best market for very heavy fat steers, and discriminates less against excessively fat bullocks than any other city. The term "Bostons" is generally applied to such carcasses. Carcass beef shipped to Boston is quartered between the tenth and eleventh ribs. New York is celebrated for its extensive trade in Kosher beef, probably four-fifths of the beef koshered in this country being used in and near that city. This accounts for the large proportion of live cattle to dressed beef shipped from Chicago to New York, and for the large proportion of medium and lower grades in shipments of dressed beef to that city. Baltimore demands a comparatively large proportion of the lower grades of beef. Philadelphia, Pittsburg, Washington, Cleveland and Buffalo use an assortment of grades similar to that sold in Chicago. Refrigerator car-routes which supply small cities and towns thruout the country handle principally the grades of beef enumerated under "Butcher Cattle". Much low-grade beef is used in mining and lumbering districts, and orders from such districts are largely for strictly lean carcasses such as common light cows and bulls.

Export carcass beef consists chiefly of medium to choice steers. Heavy heifers, cows, bulls and stags of the good and choice grades are also exported. Bruised sides are discarded, and care is observed in testing for soundness, especially "bone-sour". Export cattle are dressed differently from domestic beef in that the sides are not scribed,* the hind quarter has three ribs, and the hanging-

*Scribing consists in cutting the chine-bones the length of the fore quarter on a line midway between the back-bone and the outer surface of the carcass. This permits the chine-bones to bend outward when the beef "sets", and gives the side a thicker appearance than otherwise.

tenderloin and skirt are trimmed off. The quarters are wrapped separately in muslin. This trade has greatly diminished during recent years.

BEEF CUTS

As previously stated, wholesale fresh beef trade is about equally divided between carcass beef and beef cuts. The latter are sold both as "straight cuts" and as subdivisions thereof. The "straight cuts" handled in Chicago markets are *Loins, Ribs, Rounds, Chucks, Plates, Flanks* and *Shanks* (Fig. 22). The loin is separated from the round at the hip joint. The flank is cut from about the middle of the thirteenth rib to the opposite lower corner of the loin. The shank is sawed off just below the second knuckle (shoulder joint). The plate is cut off on a line extending from about the middle of the twelfth rib thru the point at which the shank is removed. The rib and chuck are separated between the fifth and sixth ribs.

The standard grades of straight cuts are *No. 1, No. 2, and No. 3*. Cuts that are too deficient in thickness and quality to be used on the butcher's block, and which are consequently made into boneless cuts, barreled beef, sausage, etc., are termed *strippers*.

Grading Beef Cuts

The factors that determine the grade of a wholesale cut of beef are its *thickness, covering, quality* and *weight*.

Thickness of lean flesh is of self-evident importance. Consumers demand a large proportion of lean in steaks and roasts of whatever grade. Lean beef has a much higher market value than fat or bone, hence thickness of flesh is of first consequence, even in the cheaper cuts used for boiling and stewing. The depth of flesh is usually an indication of the class of beef from which a cut has been made, especially in distinguishing steer cuts from those of cows. The shape and general appearance of a cut also depend very largely upon its thickness.

Covering or depth of fat is most essential in the more valuable cuts, viz., the ribs and loins, because they supply the trade that is most particular in regard to quality of meat; and the highest quality of lean can be secured only at the expense of a liberal amount of fat. Those who are accustomed to buying round and chuck steaks expect little or no fat. As explained in referring to carcass beef, the lower grades are often entirely wanting in outside covering; and in second-class retail markets it is not uncommon to see ribs and loins, as well as cheaper cuts, from which the fat is conspicuously absent.

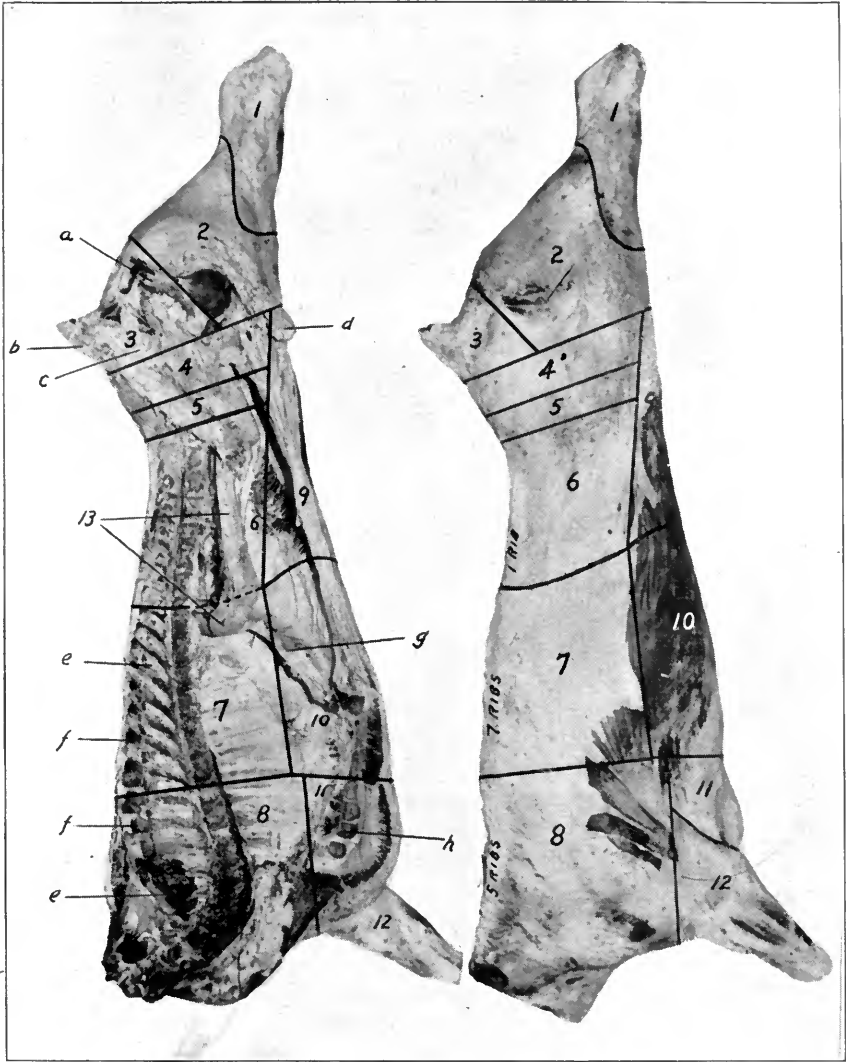


FIG. 22. BEEF CUTS.

- 1, 2, 3. Round
- 4, 5, 6. Loin
- 7. Rib
- 8. Chuck
- 9. Flank
- 10, 11. Plate
- 12. Shank
- 13. Suet

- 1. Hind shank
- 2. Round, R. & S. off
- 3. Rump
- 4, 5. Loin end
- 5, 6. Flatbone loin
- 10. Navel
- 11. Brisket

- 1, 2, 3, 4, 5, 6, 9. Hind quarter
- 7, 8, 10, 11, 12. Fore quarter
- 7, 8. Back
- 7, 10. Piece
- 8, 11, 12. Koshier chuck
- 8, 10, 11, 12. Triangle

- a. Aitch-bone
- b. Rump-bone
- c. Crotch
- d. Cod
- e. Chine-bones
- f. "Buttons"
- g. Skirt
- h. Breast-bone

Quality in beef cuts refers particularly to the grain and firmness of the lean, the marbling (distribution of fat thru the lean), and the proportion of bone and other waste in the cut. The grain of meat consists in its fineness of fiber or texture and the cut surface should be glossy, smooth or "velvety" in appearance and touch, as opposed to stringiness and coarseness. By firmness, in this connection, is meant "substance" or "body", as distinguished from a soft, gluey, or "washy" consistency of the flesh. It is an indication of tenderness, juiciness and maturity. On the other hand, firmness due to a dry, stringy condition of the flesh is objectionable. Ripening or "ageing" in the cooler improves the firmness, tenderness and flavor of beef, provided it is sufficiently fat. Very lean beef deteriorates rapidly after a few days in the chill-room. Frozen cuts sometimes develop a flabby or sloppy condition after thawing, due to the separation of the water from the tissues of the meat. This renders the cut tough and greatly detracts from its flavor. The importance of marbling consists mainly in its influence on tenderness. When fat is deposited in the connective tissue cells thruout the lean, the elasticity of the connective tissue is diminished, and the meat is improved in tenderness, juiciness, and flavor. Marbling is of special importance in ribs and loins of the higher grades, and is not usually evident in other cuts except the best No. 1 rounds and chucks. The proportion of bone directly affects the amount of edible meat in a cut and is therefore important. The bone is also a valuable indication of the age and class of the carcass from which the cut was taken. Coarse, hard bone is found in the same cut with coarse, stringy meat.

Color is of great importance in grading beef cuts, as it is an indication of the age and quality of the beef. The fresh cut surface of the lean should be a rich, bright red, and should turn brighter rather than darker after exposure to the air at refrigerator temperatures. A very dark color is an indication of either an old animal or a feverish or heated condition of the animal when slaughtered, and is also characteristic of cuts taken from bulls and stags. Exposure in a warm atmosphere, however, will produce a dark color on the surface of beef of any grade. A very pale or pinkish tinge, on the other hand, usually indicates immaturity. Cuts showing dark spots in the lean are placed in the *No. 3* and *Stripper grades*. The fat should be a clear white. In the lower grades it varies from white to yellow.

Weight affects the grade of a beef cut in the same manner and to about the same extent as in the grading of carcass beef. Altho the higher grades are made up largely of heavy cuts, a light cut may grade No. 1, if it complies with all other requirements of

that grade, and a heavy cut is graded No. 2 or No. 3 in case of deficiency in thickness, quality or color. The heavier weights of each grade are cut from steer sides, and from stags and bulls to a small extent in the No. 2's and No. 3's, while the light cuts are largely from cows. For example, No. 1 cuts are principally from choice and prime 800 to 1000-pound native steer carcasses and choice 750 to 900-pound native cows; No. 2's are largely from medium and good 650 to 800-pound steers and 600 to 750-pound cows; and No. 3's are made chiefly from 450 to 600-pound common and medium cows, also from Texas and light Western steers. Stripper cuts are made from canners, medium and common bulls, Texas and common light Western cattle.

AVERAGE WEIGHTS OF STRAIGHT BEEF CUTS (POUNDS)

Grade	Loins	Ribs.	Rounds	Chucks	Plates	Flanks	Shanks
No 1	50-85	30-50	75-110	75-110	40 80	15-20	10-20
No 2	40-60	25-35	60 80	60 80	30 50	10-15	5-10
No. 3	25-40	20-25	40-60	40 60	20-35	5-10	
Strippers	20 30	15-20	30-40	30-40	15-20		

Relative weights of the above cuts vary slightly in different markets according to the method of cutting and are varied more or less with changing market prices of the different cuts. The following table represents (1) the range of these variations and (2) the percentages that are commonly used in estimating the cutting yield of side-beef:

PERCENTAGES OF WHOLESALE BEEF CUTS TO CARCASS WEIGHT

Cuts	Loins	Ribs	Rounds	Chucks	Plates	Flanks	Shanks	Suet
Extreme range	15-19	8-11	20-26	21 27	12-16	2-5	3-7	2-7
Conventional average	17	9	23	26	13	4	4	4

In general, a high finish indicates a relatively large percent of kidney-suet; carcasses of the higher grades contain a smaller per

cent of kidney suet than lower grades if equally fat; and cows and heifers yield a larger percent of kidney suet than steers of the same grade. Otherwise the various classes and grades of carcass beef are similar in relative proportions of different cuts; and the above variations are caused mainly by the method of cutting and by individual characteristics of different carcasses.

The relative market value of these cuts correspond to the order of their arrangement in the above tables, excepting suet, which is more variable. For the purpose of mental calculations as to the cutting value per pound of side-beef, a carcass is regarded as consisting of four parts which are approximately equal in weight, viz., (1) loins and ribs, (2) rounds, (3) chucks, and (4) plates, flanks, shanks and suet. By averaging the market prices of the four divisions the value per pound of a carcass can be very closely estimated. Similarly, "hinds" are regarded as consisting of 50 percent round, 35 percent loin and 15 percent flank and suet; "fores", 50 percent chuck, 20 percent rib and 30 percent plate and shank.

It is customary in quotations of beef cuts to differentiate between steer and cow cuts; e.g., No. 2 steer loins and No. 2 cow loins. This distinction is readily recognized in the cuts by their shape, bones, thickness, quality and color as explained in reference to carcass beef. Heifer cuts are seldom quoted, owing to the demand for heifer beef in the side. "Native" and "Western" cuts are sometimes specified in quotations of No. 1 and No. 2 cuts and are distinguished by the characteristics described on page 185. In the No. 3 and stripper grades of cuts little or no distinction is made between Native, Western and Texas beef.

LOINS

The loin is the highest-priced cut of the carcass because of the tenderness and quality of the lean. The grade of a loin may be determined by marked excellence or deficiency in either thickness, covering or quality, or by a uniform degree of development in all respects. No. 1's must have a full, well-rounded shape, a complete covering of white fat the thickness of which is in proper proportion to the lean, and bright, firm, fine-grained, well-marbled flesh. No. 2's are generally less rounded in form, with insufficient, excessive, or uneven covering and a slight deficiency in grain, marbling or color of flesh; while No. 3's are more flat in shape, nearly or entirely lacking in covering of fat and very deficient in thickness and quality of flesh, but sufficiently developed to be cut into porterhouse and sirloin steaks for cheap trade (Fig. 23). Stripper loins have no outside fat and are usually extremely flat and rough in shape, with dark-colored, coarse-grained flesh and hard, white bone.



FIG. 23. A, FLAT BONE LOINS, No. 1, No. 2 AND No. 3 GRADES.
B, REGULAR LOINS, No. 1, No. 2 AND No. 3 GRADES.

Several different cuts of the loin are used extensively as wholesale cuts, particularly in the No. 2 and 3 grades. The regular or pinbone short loin is the portion between the thirteenth rib and hip-bone (pinbone) inclusive and includes from 45 to 55 percent of the full loin. It contains porterhouse or T-bone, and club steaks, and is valued at 40 to 60 percent more per pound than the full loin. This cut is made in 3 grades, the weights of which run from 20 to 40 pounds. The remainder of the full loin is called the loin end and is valued at about one-third less per pound than the full loin. It is used for sirloin steaks.

If the short loin is cut off midway between the pinbone and butt end of the loin it is known as a flatbone short loin. It sells lower than the pinbone loin, and is considerably used in Chicago markets. It is also graded No. 1, 2 and 3, and is made in averages from 20 to 45 pounds.

The tenderloin ("beef tender" or "fillet of beef") is a long muscle lying between the kidney-fat and the back-bone and extending from the thirteenth rib to the butt end of the loin. As the name implies, it is a very tender piece; and the great demand for it, notwithstanding its lack of juiciness and flavor compared with other parts of the loin and rib, is a striking example of the importance of tenderness in the estimation of beef customers. The tenderloins required to supply the demand are taken principally from No. 3 and stripper loins. They weigh 2 to 8 pounds. No. 1's must weigh above 6 pounds and have a bright color. No. 2's weigh 4 to 6 pounds; No. 3's, 3 to 4; and "strip tenders" or "shoestrings" less than 3 pounds. No. 1 tenderloins command about twice the wholesale price paid for the lowest grades. See Fig. 30.

Loins from which the tenderloin has been removed are called *strip loins* or *strips* (Fig. 24). They average 7 to 15 pounds and are graded mainly according to weight. Strips are usually cut into the *sirloin strip*, or stripped short loin, and the *sirloin butt*,



FIG. 24. FROZEN STRIP LOINS, NO. 3 GRADE.
Front View. Rear View.

which is virtually a stripped loin end. The lowest grades of strips and butts are often boned out, in which case they are known as *boneless strips* and *boneless butts*, respectively. They are almost entirely used for cheap restaurant and hotel trade to be cut into small steaks. Large quantities are frozen during the cutting season. Strips and butts are sometimes made from No. 3 as well as "stripper" loins, and include many from bulls and stags. Boneless strips average 4 to 8 pounds, and are occasionally made in averages as high as 10 to 12 pounds. Butts weigh 3 to 6 or 8 pounds.

RIBS

This cut, which includes the portion between the loin and chuck, is also known as the prime or standing rib. As the loin contains the choicest steaks, the rib contains the best roasts. Ribs and loins are commonly sold in sets at a lump price. Quoted separately, ribs are valued at 10 to 20 percent less per pound than loins of the same grade, due to difference in quality of the lean and larger proportion of bone in the rib cut.

The various grades of ribs differ in thickness, covering and quality to the same relative extent as the corresponding grades of loins. The depth and quality of flesh are apparent in the "eye" or "heart" of beef at the twelfth rib and in the cut end next to the chuck. The covering of fat on No. 1 ribs should be about one-half inch in depth. The bones in this cut serve as a very valuable index of the quality of beef, the chine-bones and ribs varying according to age as explained under *carcass beef*, and the "feather edge" of the shoulder blade indicating the age of the carcass in like manner. The latter is cartilaginous in young animals and is white and soft up to two years, after which time it gradually ossifies, and at 3 years one-half to two-thirds its length is bone. See Fig. 25.

No. 3 and "stripper" ribs are also made into "rolls". A "regular roll" consists of the lean part of the rib, stripped of the backbone, shoulder blade, fat and outer layer of meat. They weigh 4 to 8 pounds, and are used for small steaks. "Spencer rolls" are of better quality and heavier averages than regulars, and the fat and outer layer of lean are left on except that portion above the shoulder blade. Spencers average from 6 to 12 pounds, and are used for roasts and steaks. Both styles of roll are used chiefly for restaurant and small hotel trade and are sold frozen to a considerable extent.

"Pieces" consist of the rib and navel in one cut. Fore quarters from which only the ribs have been cut are called "triangles", "rattles", "slugs", "L's" or "knockouts" (Fig 22). They are graded No. 1, No. 2 and No. 3 in the same manner as straight cuts.

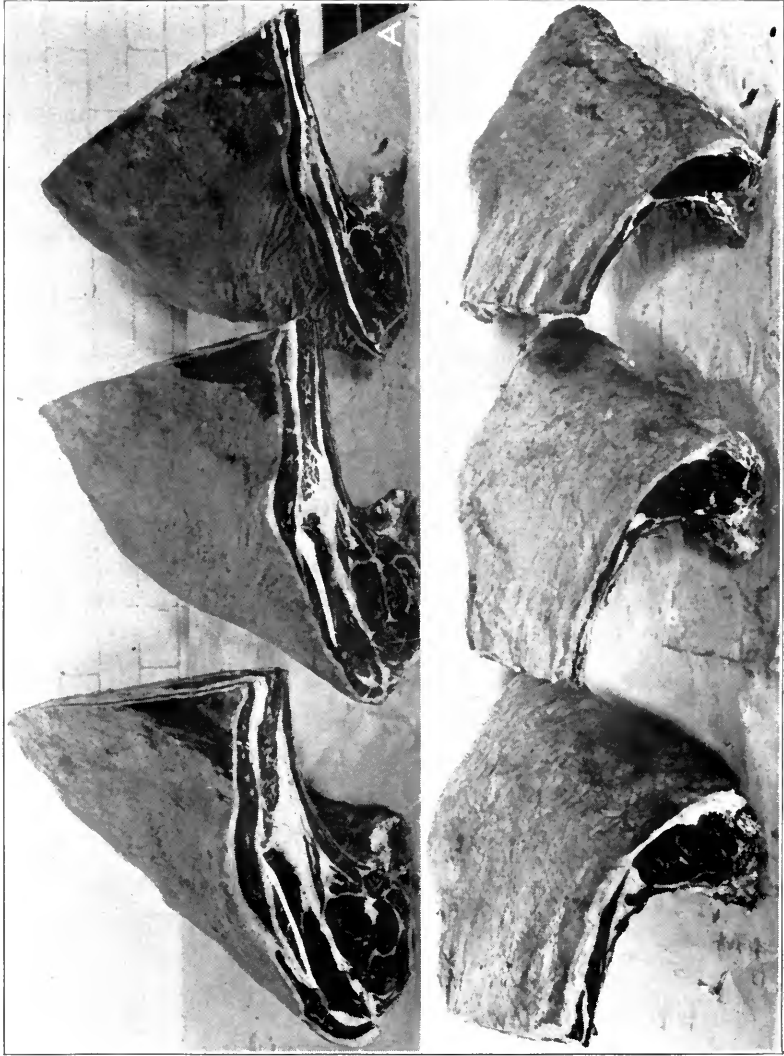


FIG. 25. RIBS, No. 1, No. 2 AND No. 3 GRADES. A, FRONT, B, REAR.

ROUNDS

The cut surface of the full round being identical with the butt end of the corresponding loin, the conditions as to grain, marbling, covering and color at that point determine the grade in each case alike. Rough or lumpy cod fat indicates a steer round, a soft, flabby bag a cow round, and a firm or hard bag a heifer. Also, in steer rounds one end of the aitch-bone is surrounded by the lean flesh of the "inside", while in cows and heifers it is surrounded by fat; and the exposed portion of the "inside" is comparatively narrow or flat in cows but rounded or triangular in steers. The shape of rounds varies exceedingly, as can be seen most readily by comparing the carcasses shown in Figs. 1 to 20. See also Fig. 26. Since the proportion of steaks which can be cut depends upon the shape of the round, the importance of this factor is evident. No. 1 rounds are generally valued at 40 to 60 percent less than the price of loins and ribs of the same grade; while No. 3's are generally quoted only 10 to 30 percent below No. 3 loins and ribs. Rounds sell relatively higher in summer than in winter because they are used principally for cutting small steaks.

Three wholesale cuts for fresh trade are made from rounds, viz., the buttock (quoted as "round, R. & S. off"), rump, and shank. On the average about 60 percent of the full round weight is buttock, 20 percent rump and 20 percent shank. The buttock is wholly suited to cut as round steaks, those nearest the rump being of best quality because containing larger muscles and less waste. This cut is quoted at about 25 percent above the price of straight rounds, the difference being less marked in the higher grades. The rump, when used fresh, is usually sold as a *rump butt*, or *boneless rump* (Fig. 27). This is made by cutting out the aitch-bone (hip-bone) and trimming off square at loin end, leaving a boneless cut (except the "tail-bone") weighing 5 to 7 pounds and worth about the same price but generally less than the full round. It is used mainly for corned beef. The hind shank consists of about equal parts of bone and boiling meat. The latter, as a retail cut, is known as the "heel of the round" or "horseshoe piece". Shank meat is principally used, however, for Hamburger, sausage trimmings, or similar purposes.

The American preference for loin and rib cuts renders it necessary to dispose of a large share of the lower grade rounds otherwise than over the block as fresh cuts. For this purpose they are stripped and made into "beef hams", rump butts and shank sausage meat. The buttocks of cow, bull and stag carcasses are best adapted for making beef hams. At least a partial covering of fat on the round is required for the bulk of this beef, but the cheapest



FIG. 26. ROUNDS, No. 1, No. 2 AND No. 3 GRADES.

grades are packed from rounds which are almost entirely free from fat. It is impossible to cure beef satisfactorily that has not reached maturity or nearly so, since it shrinks heavily on account of being more watery and does not "take the salt" as well as beef that is matured. Buttocks intended for curing are cut longer than regular, leaving a smaller rump piece. In stripping a buttock for beef hams, it is divided into three boneless pieces according to the muscular divisions of the round, making an "inside", "outside" and "knuckle". These cuts are known as a *beef set* (Fig. 30). The average proportions by weight of the three "beef hams" are 42 percent, 31 percent, and 27 percent, respectively; but the outside and knuckle are sometimes divided equally. They are frequently stored in freezers, either fresh or in brine, until it is desired to cure them. The rounds of canner sides and others of very light weight and poor quality are used to some extent for canning or sausage purposes. A "Scotch buttock" is a boneless buttock, principally from heavy No. 1 rounds, a few being made from No. 2's. Rumps are not cured to the same extent as buttocks. When barreled they are sold principally as rump butts and mess beef. For description of cured beef products made from the round, see page 210.

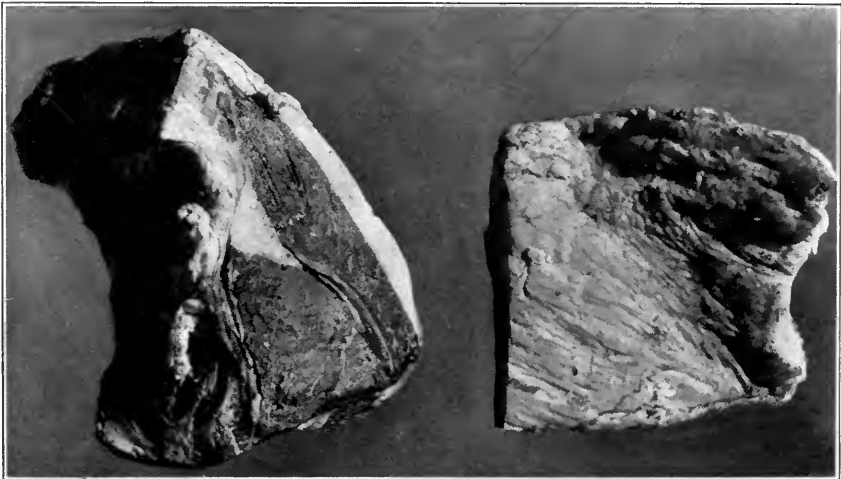


FIG. 27. RUMP BUTTS.

CHUCKS

Thickness, shape and color are the most important points considered in grading chucks; and the covering of fat is of much less consequence than in loins and ribs. The general quality of chucks is indicated by the chine and brisket bones, color and grain of flesh. No. 1 chucks have a complete covering of fat, which is thickest along the rib end of the cut. No. 2's have little and No. 3's no covering (Fig 28). Nearly equal parts of the chuck are retailed as shoulder steaks and boiling pieces, and a roast may be cut from the last two or three ribs of No. 1 chucks. Pot roasts are cut from the lower or shank side, and stews or soup meat from the neck. The proportions of the chuck which are suitable for roasts, steaks and boiling meat vary greatly according to thickness and shape; and in view of the wide difference in market value of those cuts, the importance of compact shape and full thick development of lean meat are apparent. The chine bones and shoulder blade give a clue to the age and maturity of the carcass, as explained in connection with the rib cut.

The style of cutting shown in Fig. 22 is known as the square chuck, and is the style most used in Chicago wholesale markets. Chucks are sometimes cut "knuckle*" instead of sawing off below the joint. The lower grades of chucks are often further divided in order to make the cut more salable. Such cuts are the *shoulder clod* and *boneless chuck*. The shoulder clod (Fig. 30) is a wedge-shaped piece cut from the fleshy part of the chuck just back of the shoulder blade, and extending from the elbow of the shank nearly or quite to the back-bone. It is taken mainly from No. 3 and "stripper" cuts, and to a small extent from No. 1's and 2's. It is a boneless cut weighing six to fifteen pounds, and sells from 10 to 20 percent above chuck quotations. It is used for steaks and roasts, especially in restaurants and small hotels; and is in some cases smoked and sold as a "dried beef clod". Boneless chucks are cut "knuckle out" and have the shoulder blade and ribs removed. They are made only from "stripper", No. 3 and light No. 2 chucks; they weigh slightly less and sell about 10 percent higher than full chucks of the same grade. They are principally used for sausage. Necks and neck trimmings are also quoted as sausage-meat, and are used fresh to some extent for soup, hash and mince-meat.

Scotch clods are also made from boneless chucks. This is an entirely lean cut, consisting of the inner portion underneath the blade bone, and is the best part of the chuck. It is principally frozen and exported to Great Britain.

*The upper or shoulder joint.

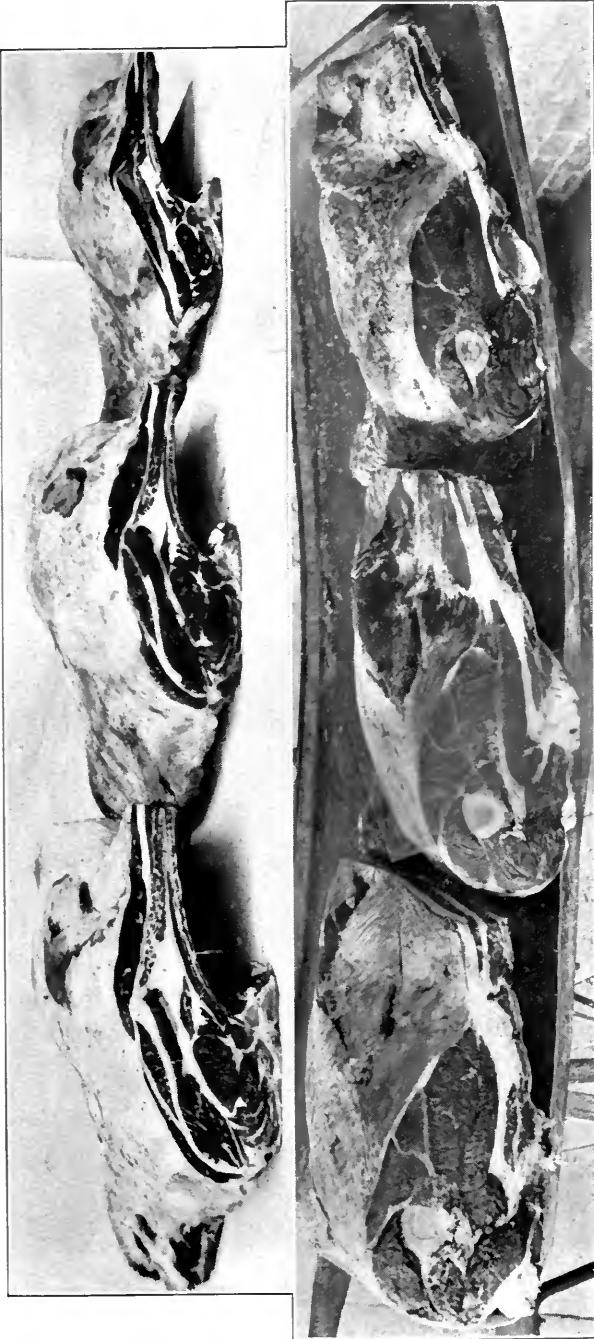


FIG. 28. CHUCKS, No. 1, No. 2 AND No. 3 GRADES. (ABOVE, REAR VIEW. BELOW, SIDE VIEW).

“Kosher” or “New York” chucks consist of the square chuck, shank, brisket and neck, in one piece, (in other words, the fore quarter with rib and navel taken off) cut from Kosher cattle (p. 188). They include about one-third of the carcass weight. Beef sold to Jewish trade is mainly confined to this cut, altho ribs and navels may be so used. Kosher chucks are cut from all grades of cattle that yield other regular cuts for fresh trade, but the greatest proportion are from choice and good sides. They command a price slightly above the average price of the parts which compose them and thus sell at very nearly the price of full rounds of the same grade. About 10 percent of the carcass beef sold locally in Chicago is cut in this fashion and none is shipped owing to restrictions of Kosher regulations. See Fig. 29.

The portion of the carcass left by the removal of the Kosher chuck is called the “hind and piece”, and consists of the regular hind quarter, rib and navel piece together. A beef *back* or “back half” consists of a square chuck and rib in one piece. This cut is not extensively used. See Fig. 22.



FIG. 29. KOSHER CHUCKS, No. 1 GRADE.

REAR VIEW.

SIDE VIEW.

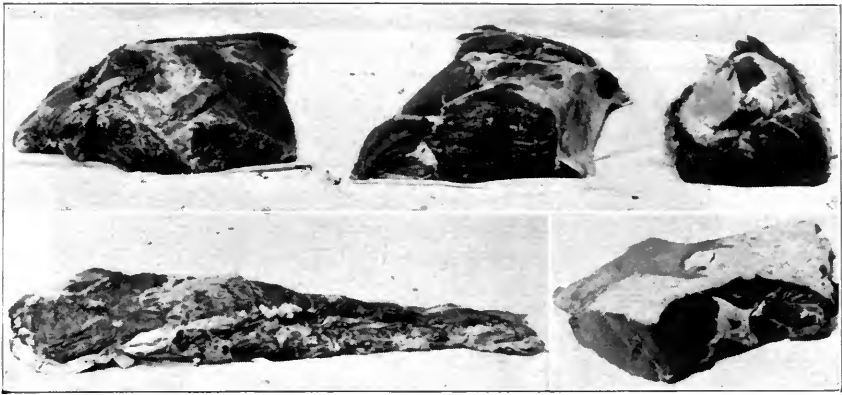


FIG. 30.

A, Beef Hams, (Left, "Inside"; Center, "Outside"; Right, "Knuckle").
 B, Tenderloin. C, Shoulder Clod.

PLATES

The most essential points in grading plates are thickness of the cut, proper proportions of lean and fat, and quality of bone. Color, grain and firmness of flesh are less important factors than in case of the more valuable cuts. No. 1 plates are entirely covered with a thick layer of fat, which is most abundant over the brisket, and have a corresponding depth of flesh. No. 3's, most of which are cow plates, are nearly bare of fat except on the brisket end, and differ from strippers principally in thickness of flesh. (Fig. 31.) The grade of a plate is determined more largely by its weight than is that of a loin or rib. Briskets and navel-ends are wholesale cuts made from plates by cutting them in two between the sixth and seventh ribs, the navel-end containing about three-fifths the weight of the plate. Heavy plates are principally barreled and sold as mess beef of various grades (p. 208) owing to the comparatively small retail demand for boiling, stewing, and corned beef. Scarcely one retail market in ten has a demand for fresh plate beef but some are sold fresh to restaurants and hotels. Corned briskets and navels are sold in most retail markets, the latter usually being boned and sold as "beef rolls". Navels were formerly valued higher than briskets, but the latter have become more generally used during recent years and now command a price one-third higher than navels. Strippers and No. 3 plates are boned out for sausage, canning purposes, and soup meat, and few full plates lighter than 30 pounds are barreled.

FLANKS

As the flank is a boneless cut, its quality and grade depend entirely upon the thickness and quality of the lean and fat. The



FIG. 31. PLATES, No. 1, No. 2 AND No. 3 GRADES.



FIG. 32. FLANKS, No. 1, No. 2 AND No. 3 GRADES.

color and grain of flesh are less variable in flanks than in the more valuable cuts, consequently the grades correspond more closely to the weights given on page 193. No. 1 flanks are thick-fleshed and covered with solid, white fat; No. 3's are thin, soft and in many cases very dark-colored and flabby. The shape and thickness of the different grades are shown in Fig 32. No. 1 and No. 2 flanks are to some extent retailed in the form of flank rolls, either fresh or corned, but they are principally barreled as mess beef (p. 209), and the lighter grades made into sausage and canned corned beef.

While straight flanks are handled but little by retail trade, they contain a cut known as the flank steak, which is used fresh extensively. It forms only about 10 percent of the flank weight but is worth about twice as much per pound as the straight flank. It is "pulled" from medium and heavy flanks and is graded mainly on a weight basis, No. 1's weighting $1\frac{3}{4}$ to $2\frac{1}{2}$ pounds, No. 2's 1 to $1\frac{3}{4}$, and No. 3's less than 1 pound. Flanks are quoted both "steak in" and "steak out".

SHANKS

Except when otherwise specified this term refers in the market to fore shanks, or "shins". Hind shanks are described in this bulletin in connection with rounds. Shanks cut from square chucks are regular or "clod off" shanks. Those taken from "knuckle out" chucks include a part of the shoulder clod and are quoted "clod on". The shank carries little or no covering of fat, and the most important points are thickness of lean with light bone. A large percentage of the supply of shanks are not graded but are stripped (boned) in the packing house, the meat being known as "shank meat", and used for sausage.

Those that are sold fresh are taken by retailers, restaurants and hotels for soup-meat and stews, especially in winter, and are generally graded simply as light and heavy, or below and above 10 pounds. They sell about one-third higher than hind shanks. See Fig. 33.

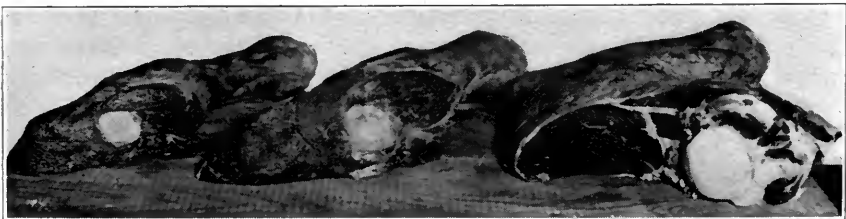


FIG. 33. SHANKS.

No. 3 Grade.

No. 2 Grade.

No. 1 Grade. Clod On.

SUET

Little kidney suet is sold in the wholesale beef trade beside that which goes with carcass beef. (Fig. 22.) Sides and hind quarters are sold with suet in, and retail meat dealers sell more or less of this fat back to packers or other buyers of "shop fats". It is quoted together with beef cuts, however, and is sold in but one grade, which must be clear white and brittle, and weigh 5 to 10 pounds trimmed. Kidney suet sold at retail is used for cooking purposes as a lard substitute, and for mince-meat especially during the winter season. The bulk of the suet supply is used for the manufacture of butterine, cooking compound, soaps, oleo-oil and stearin.

TRIMMINGS

In making beef cuts, especially boneless cuts and those used for barreled and canned beef, scraps of various size and shape accumulate. Their value depends upon the size and quality of the pieces and the proportion of lean meat they contain. Two grades of trimmings are recognized. The No. 1 grade consists of large pieces that are comparatively free from fat, such as neck, brisket, and chuck trimmings and hanging tenderloins. No. 2 trimmings include rib, loin, tenderloin, flank and navel trimmings, being small scraps with a larger proportion of fat than No. 1's. Both grades are used principally for sausage and canned meats. They are packed in 100-pound boxes or in slack barrels and sold both fresh and frozen; they are also partially cured in tierces with salt, saltpetre and sugar and sold as "curene" trimmings. The supply of trimmings is largest during the fall cattle-cutting season.

CURED BEEF PRODUCTS

As previously stated, about one-fourth of the wholesale beef supply is marketed in a cured form. The plates, flanks and rumps of all grades of cattle are at times used in this way and in the lower grades of beef the round and chuck are quite commonly cut up and cured before marketing. The less salable cuts and grades of beef are held in storage for longer periods and are shipped greater distances than the higher grades, and various cured products are the most economical and convenient forms in which to store and ship such meats. Beef is packed as *Barreled*, *Smoked* and *Canned* Beef, and is also a constituent of various kinds of sausage.

BARRELED BEEF

Barreled or corned beef is packed in brine and is quoted both in 200-pound (net) barrels, 300-pound tierces and in half- and

quarter-barrels. It may be cured in the barrel or cured in vats before packing. The standard barreled beef products are described below. For description of the cuts from which the various grades are made see pages 200 to 207.

Extra India Mess Beef is made from heavy fat No. 1 plates weighing 65 to 80 pounds, cut into pieces of about 8 pounds average and packed in tierces or barrels. It is the highest grade of barreled beef and is sold largely thru British markets for army and navy use. *Fulton Market Beef* is of the same quality as *Extra India* but from 60 to 70 pound plates, and is usually put up in half barrels or tubs for domestic trade. These and the two following grades of plate beef are usually packed with the lower side of the brisket piece removed.

Extra Plate (Extra Family) Beef is cut from moderately fat No. 1 plates, (50 to 60 pounds), and packed like *Extra India*. It is exported principally to various countries in northern Europe.

Regular Plate or Family Beef consists of No. 2 plates (40 to 50 pounds), with good proportions of fat and lean, cut into pieces of 6 to 8 pounds and packed the same as *Extra India*. It is also sold largely in northern European countries.

Packet Beef is made from 30 to 40 pound plates (heavy No. 3's and light No. 2's) cut the same as other grades of plate beef. It is used thruout Europe, the West Indies, Central and South America.

Common Plate Beef is made from No. 3 plates, 20 to 30 pounds average, cut and packed as explained above. It is the lowest grade of barreled plate beef. This grade, also *Prime Mess* and *Extra Mess Beef*, is sold to the same trade as *Packet Beef*.

Rolled Boneless Beef (*Rolled Beef* or *Rollettes*) consists of plates with a portion of the brisket cut off, the remainder of plate being boned, rolled and wound with twine. It is made from No. 2 and No. 3 plates of 25 to 40 pounds average. The rolls weigh 8 to 12 pounds and are cured in mild brine.

Prime Mess Beef consists of about 100 pounds of plates and 100 pounds of chucks, rumps, and flanks per barrel cut into pieces of 6 to 9 pounds. The proportions of the cuts named are varied according to demands and may contain 100 pounds of chucks with the remainder plates, flanks and rumps, or as otherwise specified. This grade is made from heavy No. 3 and light No. 2 cuts.

Extra Mess Beef contains the same assortment of cuts as *Prime Mess* but is made only from No. 3 cuts.

Rump Butt Beef is cut from rumps off the medium and lower grades of rounds, and is boneless except a small piece of tail-bone. The pieces average 4 to 6 pounds each. It is sold largely in lumbering districts and to the fisheries trade.

Mess Chuck Beef is made from chucks of the medium and lower grades cut into square pieces of approximately 8 pounds. It is used by the same class of trade as Rump Butt Beef.

Beef Hams (see p. 199) are barreled in sweet pickle, both in sets and separately as insides, outsides and knuckles. They are, however, sold in the barreled form only to a small extent, being principally smoked. They are graded according to quality and weight.

Scotch Buttocks (see p. 201) are barreled in a mild plain pickle and shipped to Glasgow especially during the summer season. They are usually made in only one grade from No. 1 rounds.

SMOKED BEEF

Smoked or dried beef is almost entirely limited to beef hams, which, after curing in sweet pickle, are dried and smoked. The method of cutting is described on page 199. Like barreled beef hams, the insides, outsides, and knuckles are sold either separately or in sets, the insides being valued highest, knuckles slightly lower, tho sometimes the same as insides, and outsides lowest. The pieces weigh 5 to 12 pounds, knuckles being lightest and insides heaviest. The heavier grades of each cut are most in demand. Dried beef hams are sold as chipped beef by retail butchers and grocers; much dried beef is also put up in sliced form, sealed in glass jars or tins of from 1 to 5 pounds. The consumption of dried beef is greatest during the summer months.

Shoulder clods (p. 202) are sometimes smoked and known as "dried beef clods". Briskets of choice cattle are also smoked in some cases and sold as "Smoked Brisket Beef", principally to Kosher (Jewish) trade.

CANNED BEEF

This term applies to beef sealed in tins or glass jars. With the exception of a few products the meats are first given a mild cure, and with the exception of dried beef they are partially cooked (parboiled) immediately before sealing. The air is removed from the can or jar by steam pressure or pneumatic suction, and the contents sterilized under steam pressure after the can is sealed. All lean parts of the carcass and especially of the fore quarter are suitable for canned beef. Parts of the rounds and chucks of canner cattle, and of the plates of cutters and dressed beef sides, have sufficient quality and thickness to can in large pieces and sell as roast, boiled or corned beef. The remaining cuts of canner cattle, and trimmings from beef cuts of all grades, are canned in a sliced, chopped or ground form such as chipped dried beef, beef loaf and corned-beef hash, or made into some variety

of sausage. Canned beef is principally retailed by the domestic grocery trade but large quantities are exported for the same purpose and to supply army, navy and other contracts. The standard sizes are 1 and 2 pound cans, in cases of one or two dozen, but other sizes up to 14 pound cans are also used.

VEAL

Calf carcasses weighing less than 300 pounds with comparatively light-colored, fine-grained flesh are classed as veal. The veal trade is essentially a fresh meat trade, but little being canned or cured owing to the demand for fresh veal and the difficulty of curing it satisfactorily. Considerable veal is stored in freezers in the same manner as beef. The wholesale markets handle veal both in the carcass and in certain cuts of the same, but about 90 percent of the trade consists of carcass veal. Unlike all other meats described in this bulletin, veal is extensively slaughtered in the country and supplied to the Chicago trade thru commission houses. About half of the local Chicago wholesale trade consists of country-dressed calves, altho statistics show a steady increase in the relative number slaughtered by the leading packers.

CARCASS VEAL

In dressing calves, they are split only thru the hench-bone and breast-bone, as shown in the illustrations. The skin is left on in order to preserve the color and moisture of the flesh, which dries out and turns dark much more rapidly than beef when exposed to the air. Calves sold to local dealers are often skinned at the wholesale markets immediately before delivery. Skinned calves that are sold as carcass veal are usually either split thru the back-bone, making two equal sides, or divided into saddles and racks, for convenience in handling. Carcass veal quotations are based on gross weight except where skinned calves are specified.

Grading Veal

The grade and value of a calf carcass depend upon its *form*, *quality*, *finish* and *weight*.

The *form* or shape required is a broad, compact body with full thick development thruout and especially in the ribs, loin and legs since those are the most valuable parts. Long shanks and necks, heavy breasts and sharp backs are the most common faults of form. Buyers usually examine the back, flank and brisket by feeling to determine the thickness of flesh.

Quality is indicated by the color and grain of flesh, softness and color of the bones, and general appearance of carcass. The flesh should be light pink, as nearly white as possible, containing

an abundance of "baby fat" and free from spots. It should be firm rather than soft and flabby, and should be smooth and velvety in appearance. Dark-colored or coarse-grained flesh is an indication of too much age, insufficient nourishment, or too much coarse feed; while milk-fed calves are easily distinguished from others by their bright fine-grained flesh and clear, white fat. The bones should be small as indicated especially by the shanks; and the back-bone and breast-bone should be soft and red. The ribs of choice young calves are also red with blood. White, soft, cartilages or "buttons" on the chine-bones and brisket also indicate desirable quality. Properly finished native calves four to six weeks old produce the most salable veal, but many choice natives are eight weeks old; Westerns are best at eight or ten weeks; and calves under three weeks old are subject to condemnation. The "toes" (dew-claws) harden at two or three weeks of age. A thick soft coat of hair and bushy tail are characteristic of choice calves, as against short hair lying close to the skin and a small "whiplash" tail such as are often found on western calves. Sex is of small importance in carcass veal. Buyers prefer heifers somewhat and object to the filling of orders entirely with steer or bull calves, but usually buy without reference to this point.

Finish refers to the fatness of the carcass, also to the quality of flesh so far as it depends upon the degree of fatness. It is judged from the amount of fat found on the kidneys, in the crotch and on the flank and breast. On skinned calves the "fell", (a thin membrane which covers the carcass) appears white and soft on well finished calves, while on those lacking finish it is dry and dark-colored. No marbling of fat is found in veal as in beef. The outside fat consists only of the "fell" and of more or less "baby fat" at the flanks, brisket and rump.

Weight is important in its influence on the size of retail cuts and in its relation to the age and quality of the carcass. Average weights of the veal supply vary greatly with the season, being lightest in April and May with the advent of the new calf crop and gradually becoming heavier until the next annual veal season. This variation affects the grading of the higher grades more than the lower ones owing to the greater importance of age and quality in those grades. The weights found in the different grades are given below, and it will be observed that the rating is chiefly on the basis of weight in the lower grades. Dressed calves weighing less than 50 pounds are liable to and usually should be condemned. Some country calves as light as 35 pounds are received, but few below 50 pounds are passed by the food inspectors.

The grades of carcass veal as determined by the above factors, the limits of weight generally found in each grade, and the weights which include the bulk of each are as follows:

GRADES.	EXTREME WEIGHTS	WEIGHT OF BULK
Choice	80 to 120 lb.	90 to 100 lb.
Good	70 to 130 lb.	75 to 95 lb.
Medium	60 to 160 lb.	65 to 80 lb.
Light or Common	40 to 75 lb.	50 to 65 lb.
Heavy	150 to 300 lb.	160 to 200 lb.

CHOICE CALVES

Choice or No. 1 calves, besides weighing within the limits given above, must have the form, quality and finish described in the paragraphs on grading veal. They may be from four to eight weeks old, depending upon weight and finish. See Fig. 34.

GOOD CALVES

Good veal consists of calves which fall short of the most select grade by reason of a deficiency or excess of weight and age; or, if within the requirements in those particulars, lack of finish, quality or form. Insufficient weight and finish are the most common defects of good veals as compared with the choice grade. See Fig. 34.

MEDIUM CALVES

Calves are more often too light than too heavy to grade *good* or *choice*, and the finish of small calves is usually in keeping with their weight. Accordingly, medium veal (also called *fair*) generally runs below 80 pounds. Scarcely any dressed calves over 160 pounds are sold for Chicago city trade, the heavier ones being sent to outside markets. The kidney fat is usually less abundant than in good calves and the form not so smooth nor compact. Many in this grade are narrow in the back, loin and ribs, light in the flank and sharp in the chine. See Fig. 35.

LIGHT CALVES

Except in unusual cases, veal carcasses weighing less than 65 pounds are graded as *common* or *culls* because of the small demand for veal of such light weights. The restricted demand is due to the lack of finish found in such carcasses and their soft, undeveloped flesh. Kidney fat is absent or nearly so. Many cull calves are barely old enough to pass inspection. The lightest culls (35 or 40 pounds) are known as "bob veal" and are usually condemned. See Fig. 35.

HEAVY CALVES

Heavy veal calves vary more in quality, finish and weight than light young calves, and this grade includes both smooth, thick

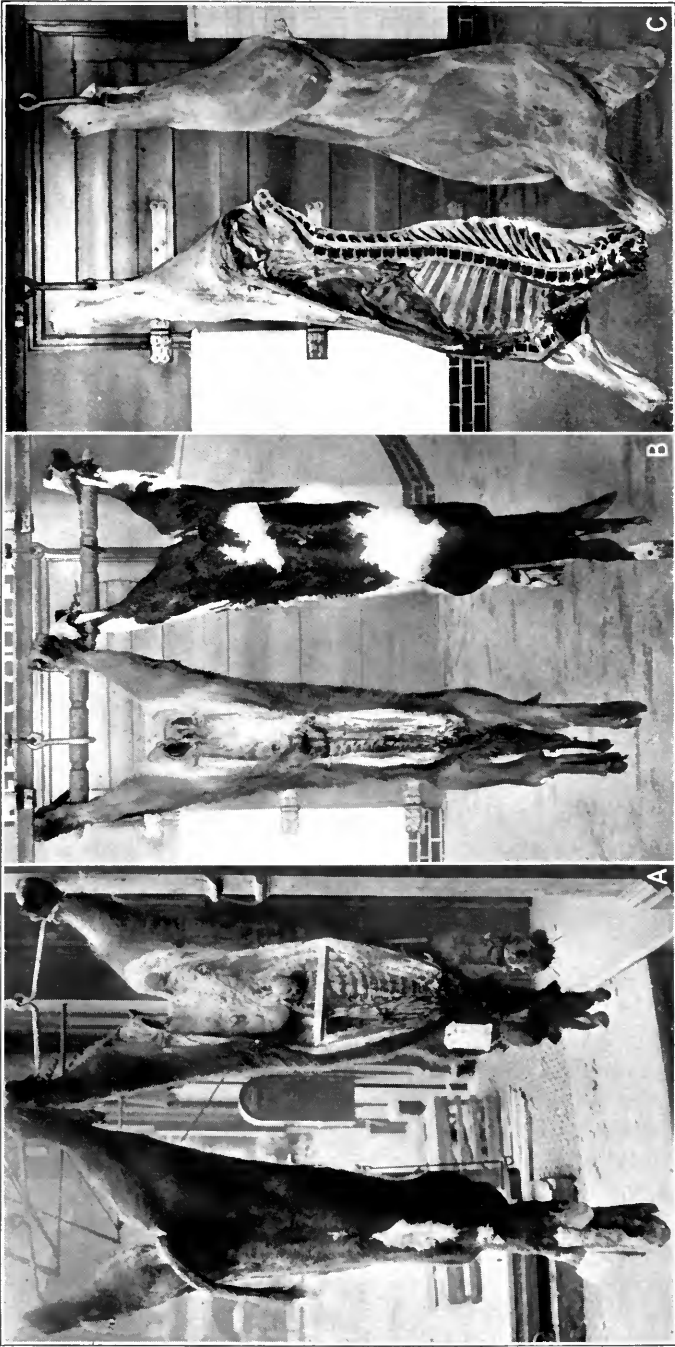


FIG. 34. A, CHOICE CALVES. B, C, GOOD CALVES.

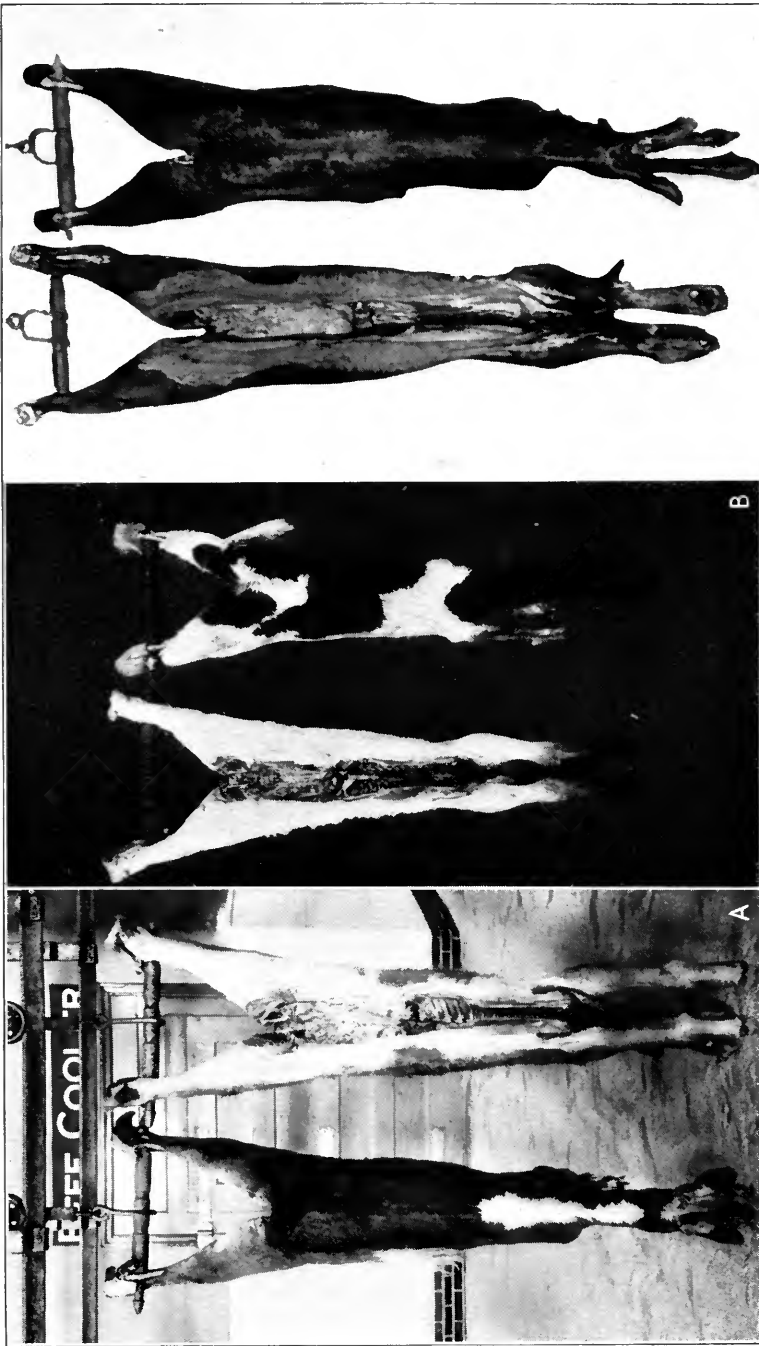


FIG. 35. A. MEDIUM CALVES.

B. LIGHT CALVES.

C. HEAVY CALVES.

calves of 150 to 300 pounds weight, and the coarse, "bony" sort of the same weights. As a class they sell lower than light calves but in some markets and especially in small cities heavy, well fattened veals sell as high as light and medium grades. Neither heavy nor light calves are valued higher than the medium grade under ordinary conditions. The heavy weights are quoted relatively higher during spring and early summer, when light calves are most plentiful, than at other seasons. It is customary to skin and split the heaviest calves shipped from wholesale houses. See Fig. 35.

"Native" and "Western" Veal

Among dressed calves of the various grades are found those which have apparently been fattened on milk under shelter with little exercise, and shipped but a short distance, if any, before slaughtering; and another class of calves which have had little milk, much exercise, and shrinkage incident to exposure or too long shipment on foot. The former are called "*Natives*". They have, as a rule, long, soft hair with bushy tail and light-colored, fine-grained flesh, indicating indoor feeding and an abundance of milk. They consist largely of young calves of *choice*, *good* and *light* grades. Over 90 percent of the dressed veal handled at Chicago is "*Native*" veal, about half of which consists of country-dressed calves consigned to commission firms. A large percentage of veal shipments sent east is, also made up of "*Natives*".

"Western" calves have coarse, dark-colored flesh and short, straight hair, which are indications of insufficient nourishment and care. The bones are whiter and less spongy than those of "*Natives*", indicating more age. They grade principally as *medium*, *heavy*, and *light*. Many Western calves slaughtered at Missouri river markets and Ft. Worth are received at Chicago. "Westerns" are best adapted to the trade of small cities and towns because of the wider range of weights and quality which is salable in such markets. A large proportion of Western-dressed calves are frozen during the summer and fall, and held for winter trade. They are skinned before freezing. All grades of "Westerns" are frozen, and the weights most used for this purpose are 100 to 175 pounds.

Kosher veal consists of the fore quarters (including 12 ribs) of calves slaughtered and handled according to Jewish regulations similar to those that apply to cattle (p. 188). *Choice*, *good* and *medium* calves are the grades principally used.

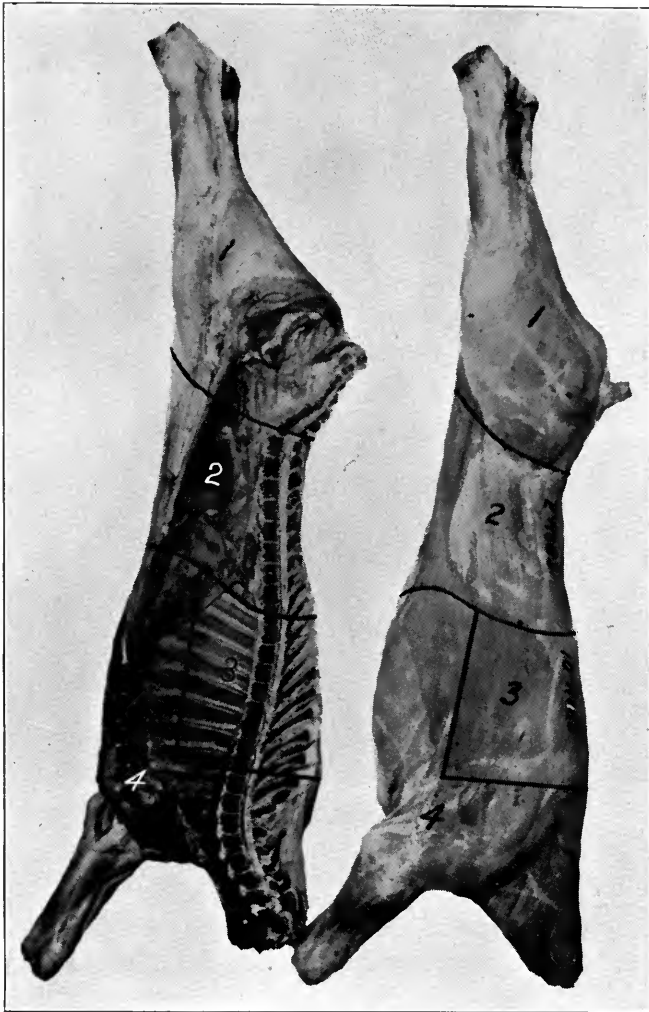


FIG. 36. VEAL CUTS.

- | | |
|------------------------------------|---------|
| 1, 2. Saddle (or 2 hind quarters). | 1. Leg |
| | 2. Loin |
| 3, 4. Rack (or 2 fore quarters). | 3. Ribs |
| | 4. Stew |

VEAL CUTS

Only 10 to 20 percent of the supply of dressed calves are cut up in the wholesale trade, since most retail markets that handle veal have demand for all cuts. A few high-class markets, however, require a larger proportion of choice than of cheap cuts; Kosher

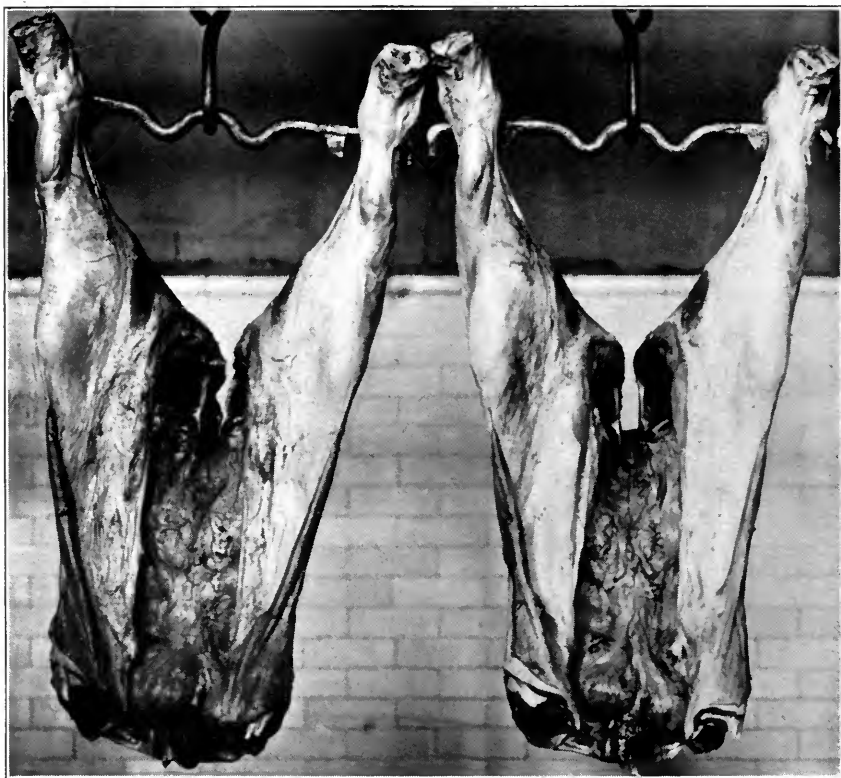


FIG 37c. VEAL SADDLES.

Choice

Good

trade takes only a part of the fore quarters; and a small percent of the supply is cut on account of bruises and other defects. Veal cuts are made from all grades of carcasses but principally from those not better than medium to good in quality and weighing 70 to 120 pounds. The carcass is skinned before cutting.

The cuts most commonly made are the *saddle* and *rack* (Fig. 36). The carcass is "ribbed" between the eleventh and twelfth ribs, the hind quarters together forming the saddle, and the fores, the rack. They are about equal in weight. In some markets the division is made between the tenth and eleventh ribs. Skinned calves are sometimes split into sides in the same manner as a carcass of beef. They are also quoted as separate fore and hind quarters.

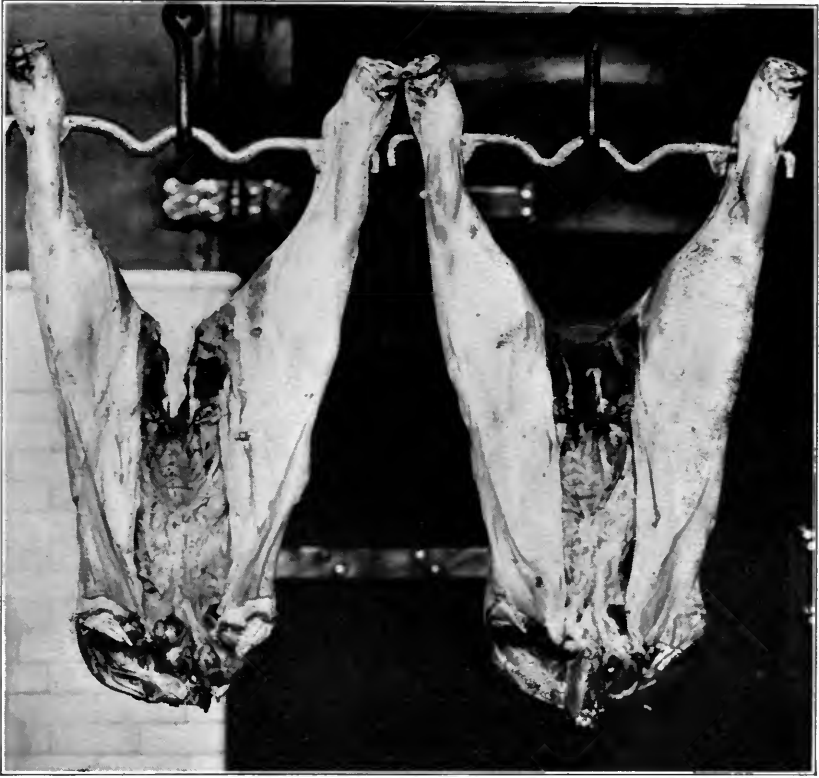


FIG 37b. VEAL SADDLES.

Medium.

Common.

SADDLES

The grades of saddless are *choice*, *good*, *medium* and *common* (Fig. 37). They weigh 30 to 125 pounds and the lighter weights are usually quoted highest. The most essential points in addition to weight are fullness of loin and leg; firm, light-colored flesh; soft back-bone and hench-bone; and a proper amount of fat, especially evident at the crotch, kidneys and flanks. The value of a saddle depends upon the quality and size of loin chops and leg roasts or cutlets which can be cut from it by the retailer. The two loins are frequently sold in one piece, including about one-sixth of the carcass weight and averaging 10 to 25 pounds. The legs constitute slightly more than one-third the carcass weight and average 20 to 40 pounds per pair.

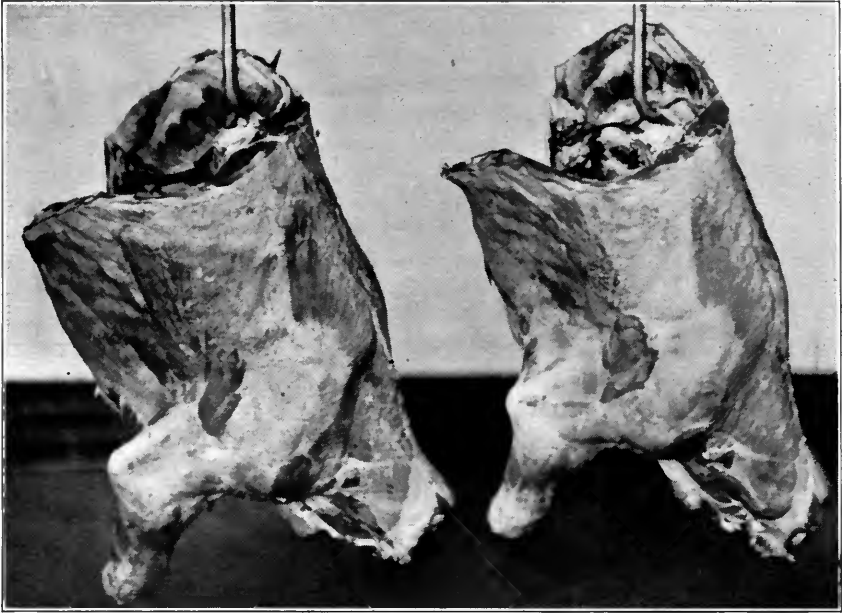


FIG. 38a. VEAL RACKS.

Choice.

Good.

Hind quarters are graded in the same manner as saddles, and the weights quoted are 15 to 60 pounds.

RACKS

Racks are graded *choice*, *good*, *medium* and *common* and are quoted in the same weights as saddles, viz., 30 to 125 pounds (Fig. 38). They are judged largely by the thickness, quality and color of flesh; softness and color of back-bone, brisket and ribs; and shortness of shanks and neck. The part of the rack most valuable to the retailer is the rib cut or hotel rack, which is used for chops. This is sold as a wholesale cut in some markets, weighing 5 to 12 pounds. The remainder of the rack is known as the stew or chuck. The two chucks include about one-third of the carcass weight, and average 10 to 25 pounds each.

Fore quarters are sold separately to a small extent. They are graded on the same basis as racks and weigh the same as hind quarters, viz., 15 to 60 pounds.

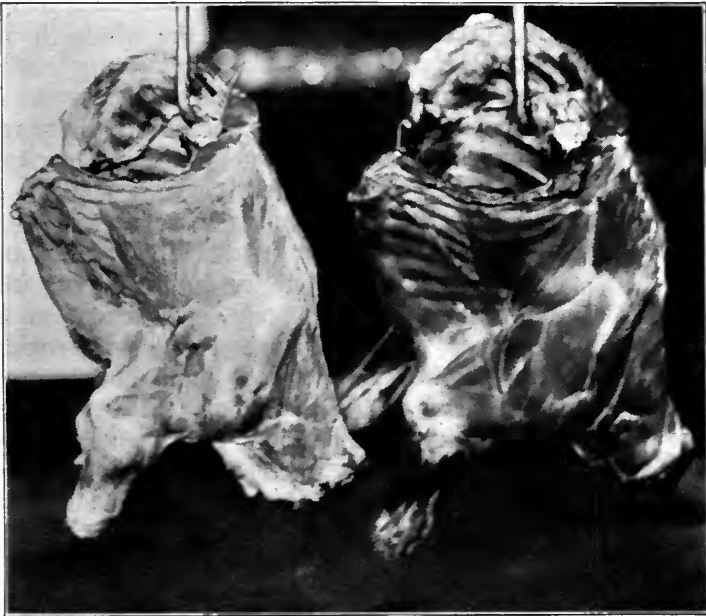


FIG. 38b VEAL RACKS.

Medium.

Common.

A body of veal is the carcass minus the legs. It includes slightly less than two-thirds the weight of carcass. Bodies are graded in the same manner as carcass veal.

MUTTON AND LAMB

Dressed sheep and lambs are handled and classified together in the wholesale trade and may therefore be described and illustrated together most readily. Mutton and lamb are sold almost entirely as fresh or frozen meats, and the bulk of supplies, except those frozen, are disposed of within a week or ten days after slaughter. Chilled and frozen mutton and lamb are handled at the same temperatures as beef. Only a few heavy fat sheep are held in chill rooms for ripening. The freezing of mutton and lamb, however, is carried on to the same relative extent as that of beef. The freezing season extends from September to February. Only a small percentage, and that of the lowest grades, is canned, and practically none is cured.

Because of their high market value, mutton and lamb are used by a wealthier class of consumers on the whole than beef, pork or even veal. Careful and quick slaughtering and good facilities for refrigeration are more essential to the proper handling of this meat than is true of beef or pork. For these reasons the use of mutton and lamb is more largely confined to city markets, and they come into closer competition with poultry, game, etc., than is true of other meats. For the same reasons, together with the fact that lamb is equal or superior to mature mutton in flavor and palatability, the demand for lamb is large in comparison with mutton, and approximately two-thirds to three-fourths of the wholesale supply of mutton and lamb consists of the latter. The wholesale trade in both lamb and mutton has shown a remarkable increase during the past fifteen years, having at least doubled during that period. Improvement in quality of supplies and the development of facilities for slaughter and distribution have rapidly stimulated demand among all classes of consumers.

The proportion of dressed sheep and lambs to cuts of the same sold in the wholesale markets varies widely. In most large cities one-half to three-fourths of the trade is made up of whole carcasses.

CARCASS MUTTON AND LAMB

Various styles of dressing are used for different branches of the trade, and since the market value depends upon the manner of dressing as well as the grade of meat, both are usually specified in mutton and lamb quotations. *Plain or round-dressed* (R.D.) sheep and lambs have the pelt, head and toes removed and fore-leg folded at the knee; they are opened only from the cod or bag to the breast, split about half way thru the breast-bone, and a spread-stick placed inside the fore-ribs. (Fig. 40.) This is the style most commonly used in dressing sheep; and the best grades of lambs are usually dressed in the same manner. *Caul-dressed* (C.D.) carcasses have the ribs and flanks turned outward and fastened back with set-sticks, and the caul wrapped about the legs and laid over the inside of carcass (Fig. 46); the object being to improve the appearance, prevent drying out and in some cases (especially in lambs) to furnish the fat necessary for proper cooking. The lowest grades of sheep and all grades of lambs are caul-dressed. The term *pelt on* refers to lambs from which the pelt and head have not been removed. This style is

generally confined to light lambs. They are opened the same as round lambs, and in some markets are dressed with back-sets, and caul laid over the belly. Sheep and lambs dressed either plain, round, or "pelt on" are quoted *pluck in* and *pluck out*. The pluck consists of the heart, lungs, liver and windpipe and is either left attached to the carcass or removed, as indicated by these terms. Lambs are generally sold *pluck in* and sheep *pluck out*. Government regulations now require the toes to be removed from all dressed sheep and lambs. Some of the photographs reproduced in this bulletin were made before this rule was passed.

CLASSES AND GRADES OF CARCASS MUTTON AND LAMB

The classes of dressed sheep and lambs are *Wethers*, *Ewes*, *Bucks*, *Yearlings* and *Lambs*. This classification is based on differences in sex and degree of maturity which will be described in connection with each class.

The grades of carcasses in the different classes are designated by the terms *choice*, *good*, *medium*, *common* and *culls* or *canners*. Altho the terms "prime", "fancy", "extra choice", etc., are sometimes used in referring to carcasses of "show quality", they are less commonly used than in the beef trade owing to the wider variation which exists between the grades of beef; and the term *choice* is generally applied to all mutton and lamb above the *good* grade. *Medium* and *fair* denote the same grade, and refer to the average of each class.

Grading Mutton and Lamb

The grade and value of a carcass depend chiefly upon its *form*, *quality*, *covering* and *weight*. The method of grading is the same in principle as the grading of beef, which has been fully explained (p. 156). It is only necessary, therefore, to state the specific points to which these terms apply in the grading of dressed sheep and lambs.

Form. Good width in proportion to length together with compactness and smooth even outlines are the essential points of good shape. This implies a thick loin, broad back, well-meated ribs, a full, thick middle from shoulder to leg, plump, thick legs filled well down on the shanks, and smoothly covered shoulders. The most common faults of form are long, slender legs, narrow backs, lack of development over ribs and loin, and too much "barrel" or "belly". Long necks in ewes and heavy "bucky" necks, shoulders and briskets in wethers are objectionable.

Covering. This refers to the fatness of the carcass. It is essential because of its influence on the appearance of the dressed sheep, quality of the meat and shrinkage both in storage and in cooking. The fat should be smooth and even over the entire carcass, but only in the most highly finished sheep are the legs and shanks completely covered. The kidney fat is an important indication of finish in the minds of mutton experts. It should be well-developed but not excessive. A light kidney usually indicates lack of finish, while a very heavy one shows either an overdone condition or an uneven distribution of fat. The cod, udder, rump, flanks and brisket are other points at which the amount of fat is plainly apparent, but it should not be excessive at any of these parts. The lowest grades have practically no outside fat and the amount of covering varies more or less directly with the grades of mutton from common to choice. The covering and kidney-fat should be firm, brittle and white.

Quality. Altho a carcass of high quality must be good in form and covering, it must, in addition, have proper quality of flesh and bone, and good general appearance. The flesh should be firm and fine-grained, without the stringy, coarse appearance of aged or inferior mutton. The color of flesh varies from light pink in lambs to dull red in mature mutton, and is less variable than in beef. The covering and kidney-fat should be clear and white. The bones are an important indication of the maturity of the carcass. In lambs the brisket is soft and red, and the ribs and shank bones are colored by blood-vessels. In mature sheep the bones are white and hard. The break-joint (Fig. 39) which is described in connection with yearlings (p. 231), distinguishes lambs and yearlings from mature sheep. In no branch of the meat trade is general quality so important as in mutton and lamb, owing to the custom of using the carcasses for display purposes in retail markets. It must be so dressed, chilled and handled as to have a bright attractive appearance. In grading caul-dressed carcasses the color and quality of the caul are considered and it should be white and brittle. The quality of "pelt on" lambs is judged partially by the pelt and head, which should show no signs of coarseness. The plucks of lambs dressed "pluck in" must have a bright fresh appearance. This depends largely upon careful slaughter and refrigeration.

Weight. This is a more important factor in grading mutton than in grading beef because differences in form, covering and quality are smaller than in beef, and because the weight is often a strong indication as to whether a carcass is a lamb, yearling or



FIG 39. "ROUND" AND "BREAK" JOINTS.

mature sheep. The weights purchased by a retailer depend upon the size of chops and roasts which his customers demand; consequently the most desirable weights in the different classes are confined to rather narrow limits. In this respect the mutton and lamb trade is similar to veal. Weight is of more importance in lambs and yearlings than in wethers and ewes, and in the higher rather than the lower grades of each class. Its importance also varies at different seasons and with varying conditions of supply and demand.

WETHERS

Wether carcasses are distinguished from ewes by the cod-fat, from bucks by their smaller necks and shoulders and finer quality, and from yearlings and wether lambs by "round" joints on the fore-legs (Fig. 39). In general they are superior to ewes in compactness of form, shortness of neck and thickness of flesh. Few high grade wethers are seen in the wholesale meat markets and the supply consists largely of Westerns. They are shipped principally to smaller markets and are occasionally exported, tho the export trade has largely decreased. The grades of this class are *choice*, *good*, *medium* and *common*; extreme weights of the regular supply are 40 and 120 pounds.

Choice wethers fulfil all the conditions specified in the paragraph on grading mutton. Even covering and quality are especially important; wasty, plain or staggy wethers are discriminated against. Weights in this grade run from 50 to 100 pounds, with a few up to 120 pounds; the handy weights are 50 to 65 pounds and bulk of supplies weigh 50 to 70 pounds. There is a limited but regular domestic demand for this mutton in large city hotels and restaurants and in the dining-car and steamboat trade. See Fig. 40.

Good wethers differ from those of choice grade chiefly in covering and general quality, the majority of this grade being slightly lacking in development of flesh and fat. The covering, however, must be sufficient to suit the consumer of heavy chops and the quality of flesh must be similar to that of choice wethers, since both grades are used largely by the same class of trade. A small proportion of wethers in this grade are too fat to grade choice. The weight seldom exceeds 100 pounds; minimum and average weights are about the same as of choice wethers. See Fig. 40.

Medium wethers are the average dressed sheep of this class and are plainly deficient in shape, covering and quality. However, they are not greatly inferior in either of these particulars, and may be good or choice in one or more of the points mentioned, especially in form or quality. Most medium wethers are partially covered with fat over the back, loin and ribs, but lack covering on the legs and shoulders. On the other hand, extremely fat, "gobby" wethers, especially those of plain quality and heavy weight, are sold at the price of medium sheep. This grade also includes a small proportion of wethers that are somewhat staggy or bucky. Extreme weights found in this grade are 40 and 90 pounds; the bulk weigh 45 to 60 pounds. See Fig. 40.

Common wethers are the lowest standard grade of wethers. Generally they have a small amount of covering over the back and loin but none on the legs; the poorest specimens of the grade, however, have no outside covering and but little fat on the kidneys. They are of very plain form and quality being thinly covered with dry, dark colored flesh, and flinty in bone. To some extent they are caul-dressed, especially the most undesirable sheep of the grade, and cauls from high grade sheep are frequently used for this purpose. They weigh 30 to 80 pounds with the bulk from 40 to 60 pounds. Few of this grade are shipped and the bulk are taken by retailers who supply a cheap trade. See Fig. 40.

A few dressed wethers of such inferior quality as to be unsuitable for block use are found in the wholesale trade, but owing

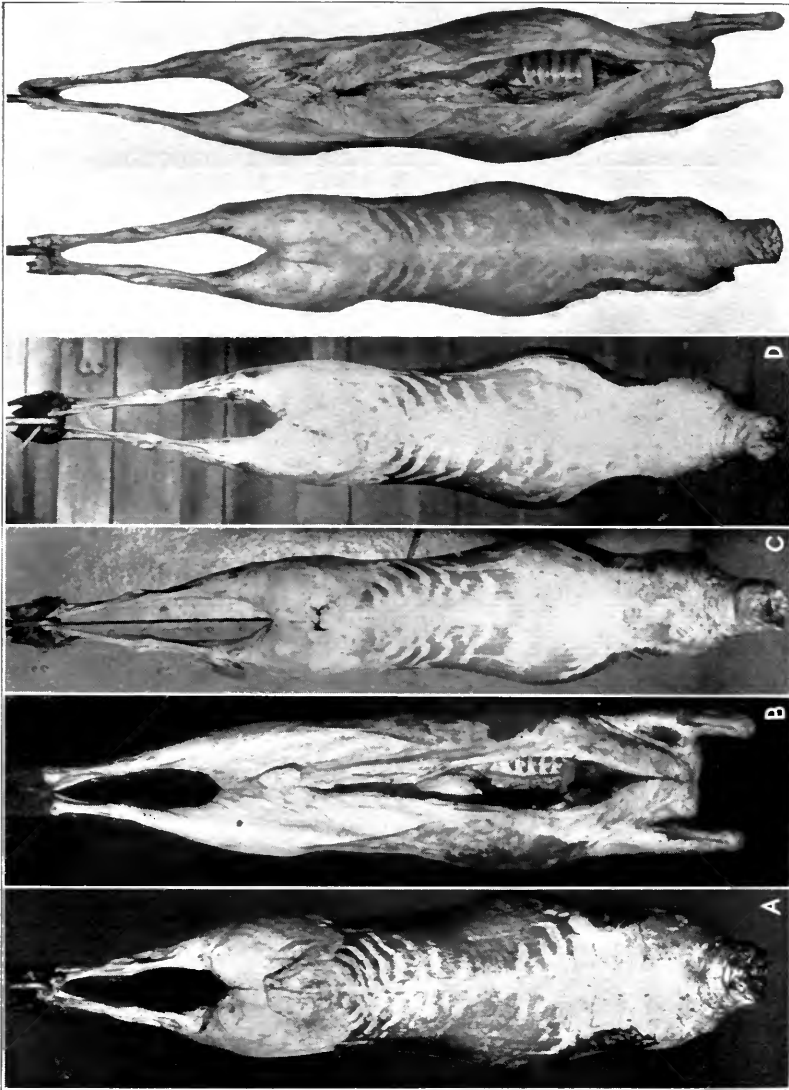


FIG. 40. WETHERS.

Choice.

Good.

Medium.

Common.

to the small and irregular supply they can not be considered a standard grade. The description of canner ewes and their use (p. 230) is applicable to such wethers.

EWES

The "bag" (udder) and a comparatively large "bung" (pelvic cavity) are characteristic of this class of carcass mutton. Ewe carcasses are also distinguished from wethers as a rule by their more angular forms, longer necks, smaller bones and less abundant flesh especially over the loin, back and ribs. In general quality and market value they compare with wethers to practically the same degree that cow and heifer beef compares with steers. Like wethers, they have "round" leg-joints. They are usually more numerous in the markets than wethers, and about two-thirds of the supply of fat, heavy mutton consists of ewes. At the same time, a larger proportion of dressed ewes is found in the lower

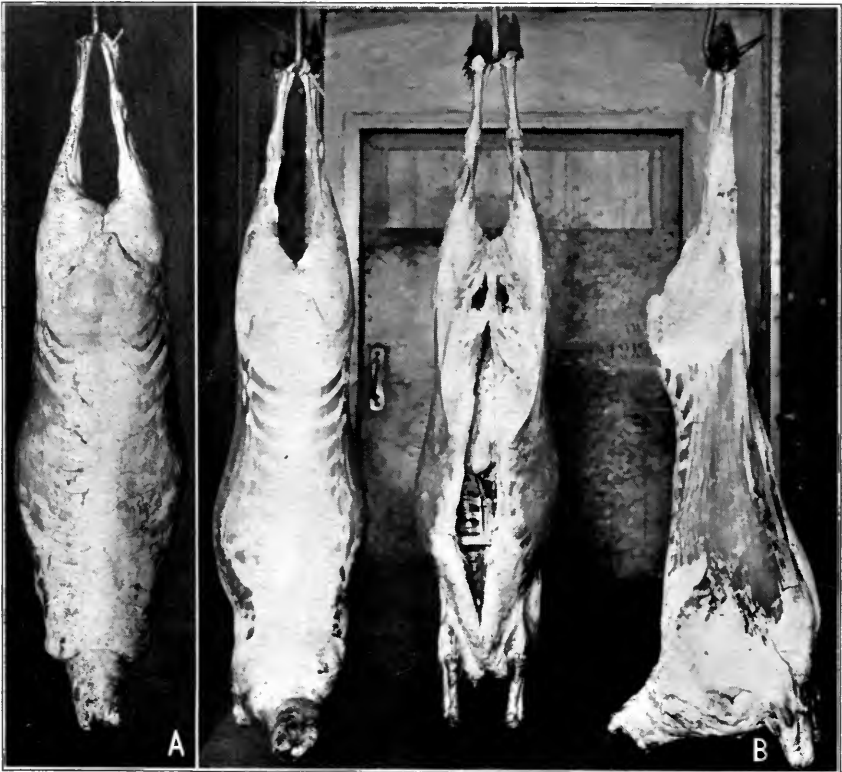


FIG. 41. EWES.

Choice

Good (3).

grades than is true of wethers, owing mainly to uneven covering and deficient quality. Light-weight dressed ewes usually classify as "sheep" instead of yearlings because their shanks do not "break" like yearling wethers of the same age and grade (p. 231). The grades of this class are *choice*, *good*, *medium*, *common* and *culls* or *canners*.

Choice ewes are similar to the corresponding grades of wethers excepting the differences enumerated in the preceding paragraph. As a rule they carry more covering and kidney-fat in proportion to flesh than wethers. *Choice* light ewes (50 to 60 pounds) are usually in greater demand than heavy carcasses because they are less "wasty" in covering; but a limited number of fat 100 to 120 pound ewes is in constant demand for the "English chop" trade

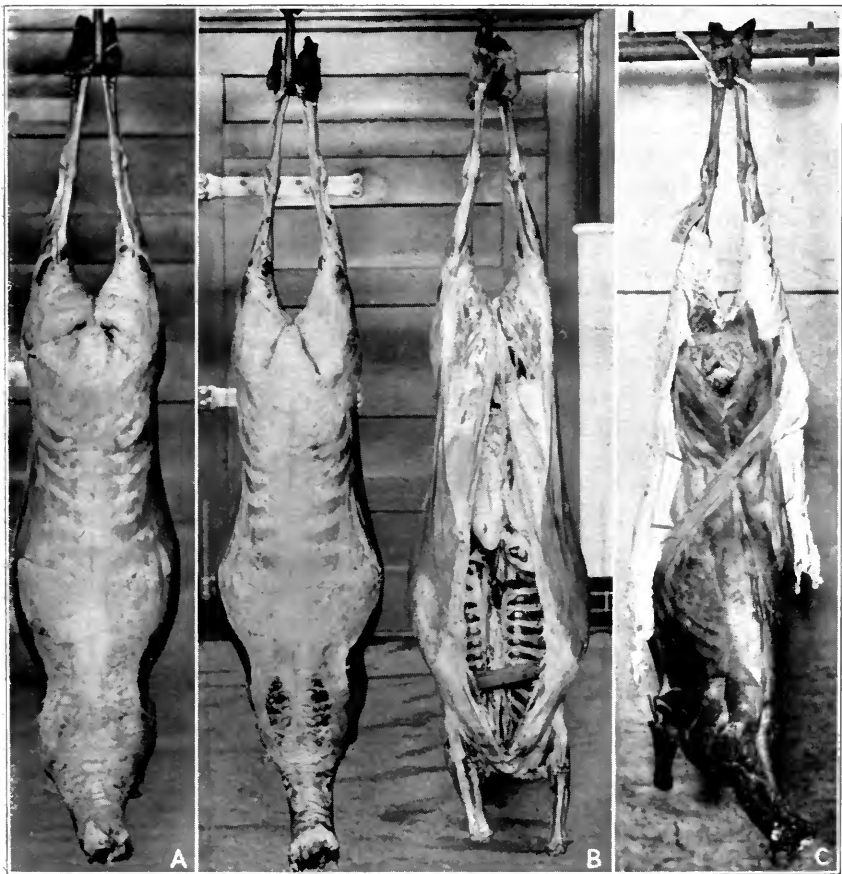


FIG. 42. EWES.

Medium.

Common.

Canner.

of large hotels and restaurants, and choice ewe carcasses as heavy as 200 pounds are occasionally seen. See Fig. 41.

Good ewes consist chiefly of 50 to 70 pound sheep slightly wanting in covering, shape or quality; also over-fat carcasses of the heavier weights. The former are sold largely to country or "car-route" trade and the latter to hotel and shipping trade. See. Fig. 41.

Medium ewes are those that are quite deficient in general development, or good in some particulars and decidedly inferior in others, such as quality and finish. They weigh 40 to 100 pounds, but the general run average 45 to 65 pounds. See Fig. 42.

Common ewes have little or no outside fat. They are still darker in flesh and whiter in bone than common wethers and many "shelly" ill-shaped carcasses are found in this grade. They weigh 30 to 60 pounds with a few coarse plain carcasses up to 80 or 90 pounds. See Fig. 42.

Culls or *canners* are the most inferior dressed sheep in the market, and consist principally of old ewes. They are entirely devoid of fat and have not sufficient flesh to be suitable for chops or roasts of even the cheapest grades. They are generally so deficient in flesh that the sides are almost transparent, and are familiarly known to the trade as "jack-o'-lanterns" and "shells". They are most numerous during the fall and early winter. The weights are 25 to 45 pounds and the bulk, 30 to 40 pounds. In most wholesale markets such sheep are sold to city dealers who supply certain laboring classes that are accustomed to use the cheapest mutton for stewing and boiling purposes. Canners are packed by a few firms in the form of "roast mutton", "potted meats", "meat loaf" and certain varieties of sausage. See Fig. 42.

BUCKS

This class makes up only a very small percent of the dressed sheep supply. Bucks can be identified by their thick, heavy necks, shoulders and briskets; large bones, coarse, dark colored flesh and fat, and thick, oily "skin". Market quotations do not recognize them as a class, but they are sold separately from other dressed sheep, excepting light bucks that resemble wethers in covering, form and quality. Many stags and some bucks are difficult to distinguish from wethers; and staggy wethers (p. 226) sell at a discount; consequently the two classes overlap to some extent. Altho the general run of bucks are sold as such in wholesale markets, and are valued 20 to 25 percent lower than wethers of the same grades and weights, they are cut by retailers and jobbers in the same manner as wethers, and the retail cuts are sold quite extensively to the same classes of trade.

The grades of bucks are less distinct than those of other classes of mutton. The terms generally used are *good*, *medium* and *common*. Good bucks are well covered with fat and have a fairly good quality of flesh. The term "choice" is occasionally applied to selected buck carcasses which are of exceptional quality and finish. Yearling bucks are generally graded *good*, since they resemble wethers more nearly than is true of heavy bucks. Medium and common bucks are graded similarly to the corresponding grades of wethers, considering the general differences noted above. The bulk of supplies in this class weigh 60 to 90 pounds; few exceed 100 pounds, and yearling bucks average 45 to 70 pounds. See Fig. 43.

YEARLINGS

This class may be defined as carcasses that show by their general development and by the "break-joint" that they are not mature sheep, but are too old and generally too heavy to be classed as lambs. The "break-joint" or "lamb-joint" is a temporary cartilage which forms a dentate suture in the head of the shank (shin-bone) immediately above the ankle. (Fig. 39.) In dressing lambs, yearling wethers and some yearling ewes the foot can be broken off at this cartilage, giving the end of the shank a saw-tooth shape; in lambs the broken surface is smooth and moist, and in yearlings it becomes more porous and dry. The shanks of mature sheep will not "break" because the cartilage is knit or ossified and the foot is taken off at the ankle instead, making a "round-joint". Shanks of female or ewe sheep outside the lamb class are, as a rule, too mature to "break". Consequently, yearlings consist chiefly (80 to 90 percent) of wethers; the remainder are ewes and a small proportion of bucks and stags which in this class frequently approach wethers in general quality. It will be seen from the foregoing statements that yearlings are an intermediate class which in certain respects resemble dressed sheep on one hand and lambs on the other. In fact, the terms "yearling lambs" and "yearling sheep" are frequently used by dealers in referring to carcasses of this description.

Yearlings are usually dressed "plain" because of the high average of the class in covering, form and quality as well as their weight, and are sometimes called "plain breakers". As a class they are superior to wethers, ewes and bucks, especially in covering and smoothness of finish. Weight is a factor of special importance in this class because, other conditions being equal, it determines whether the carcass sells on a par with heavy, round-dressed lambs or whether it must compete with wethers. A large proportion of the yearling mutton supply is sold to the same class of trade as

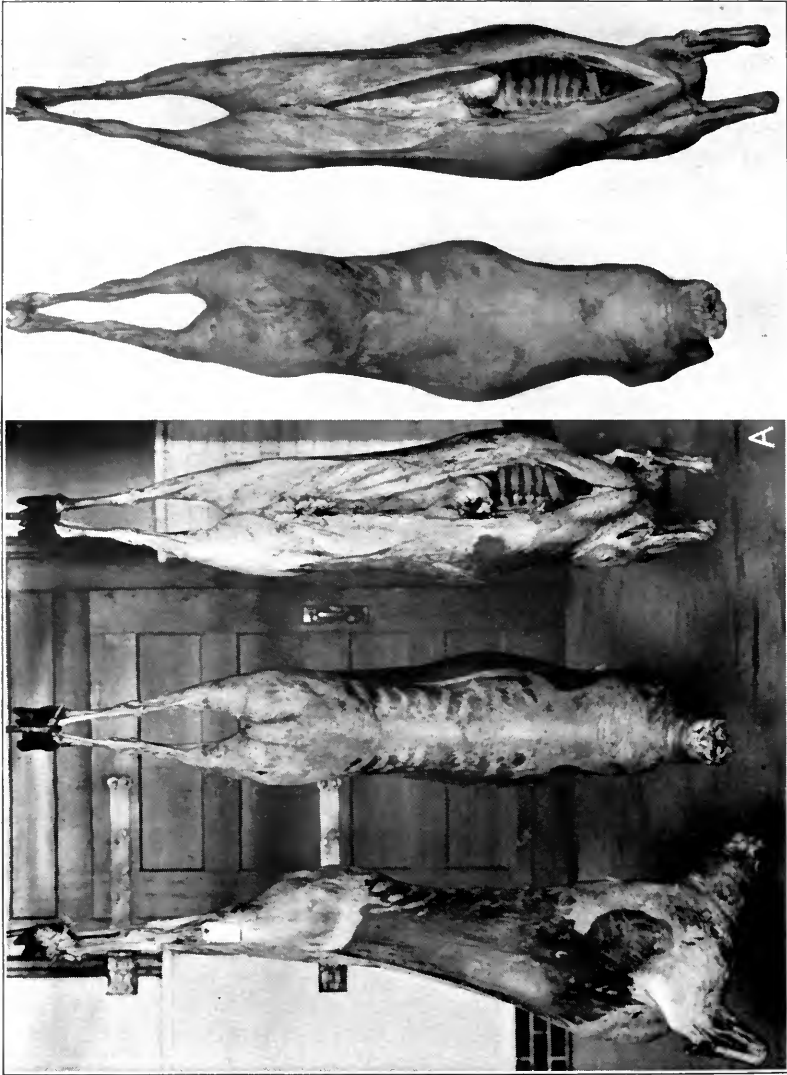


FIG. 43. BUCKS.

Good.

Medium.

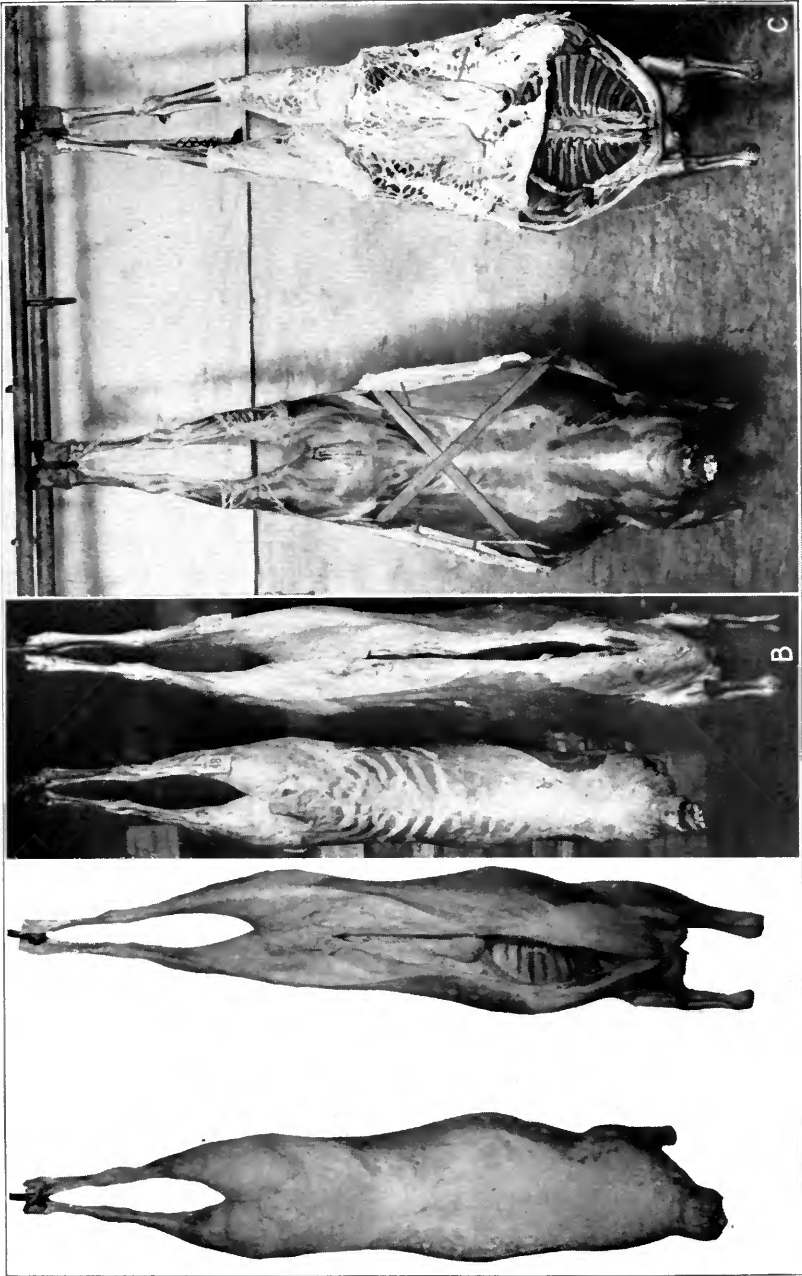


FIG. 44. A, CHOICE YEARLINGS. B, MEDIUM YEARLINGS. C, "CHOPPERS."

heavy lambs. Weights in this class range from 40 to 60 pounds. The grades are *choice*, *good* and *medium*. Yearlings which fall below medium in form, covering and quality or above the weight mentioned are generally too mature to "break", hence a common grade is not recognized in this class.

Choice yearlings are well covered with fat, with a medium kidney, compact well-rounded form and strictly choice quality. Bright color of flesh and fat and evidence of immaturity in the bones are important, since this grade is substituted for lambs to a considerable extent. They average 40 to 55 pounds. See Fig. 44.

Good yearlings include carcasses that are slightly underfinished or lacking choice quality, and those which have indications of more age than choice yearlings. A small proportion of yearlings are too thickly and unevenly covered with fat and tho otherwise choice, are graded *good*. They weigh 40 to 50 pounds.

Medium yearlings are made up of a still greater variety of carcasses than the good grade. The form and quality are often decidedly plain and the covering deficient, but a few carcasses of heavy weight and good quality sell better as medium yearlings than as good wethers, and are so graded. A few slightly staggy or bucky sheep are also included. The weights in this grade vary from 45 to 50 pounds. See Fig. 44.

"Choppers" or "chop-offs" are a grade of mutton between yearlings and sheep, consisting of light, handy young sheep weighing 40 to 50 pounds, of common to medium quality, similar to yearlings in size and shape, suitable to use as a substitute for yearlings of low grade and dressed to supply a class of retail trade which demands yearlings and lambs but at a moderate price. They are caul-dressed. Wethers and ewes are included in this grade. See Fig. 44.

LAMBS

Carcasses of sheep that are more immature than yearlings are classed as *lambs*. The difference in degree of maturity is indicated principally by lighter color and finer grain of flesh, redder and softer bones, and a break-joint that is smoother and more moist to the touch, combined generally with lighter weight of carcass. Sex is not specified in lamb quotations and only in fancy trade is discrimination made in favor of wether lambs.

About two-thirds to three-fourths of the wholesale mutton and lamb trade consists of lambs and they are sold chiefly to city dealers. The retail market trade of Chicago uses lambs almost to the exclusion of mature mutton. This is due to the demand for

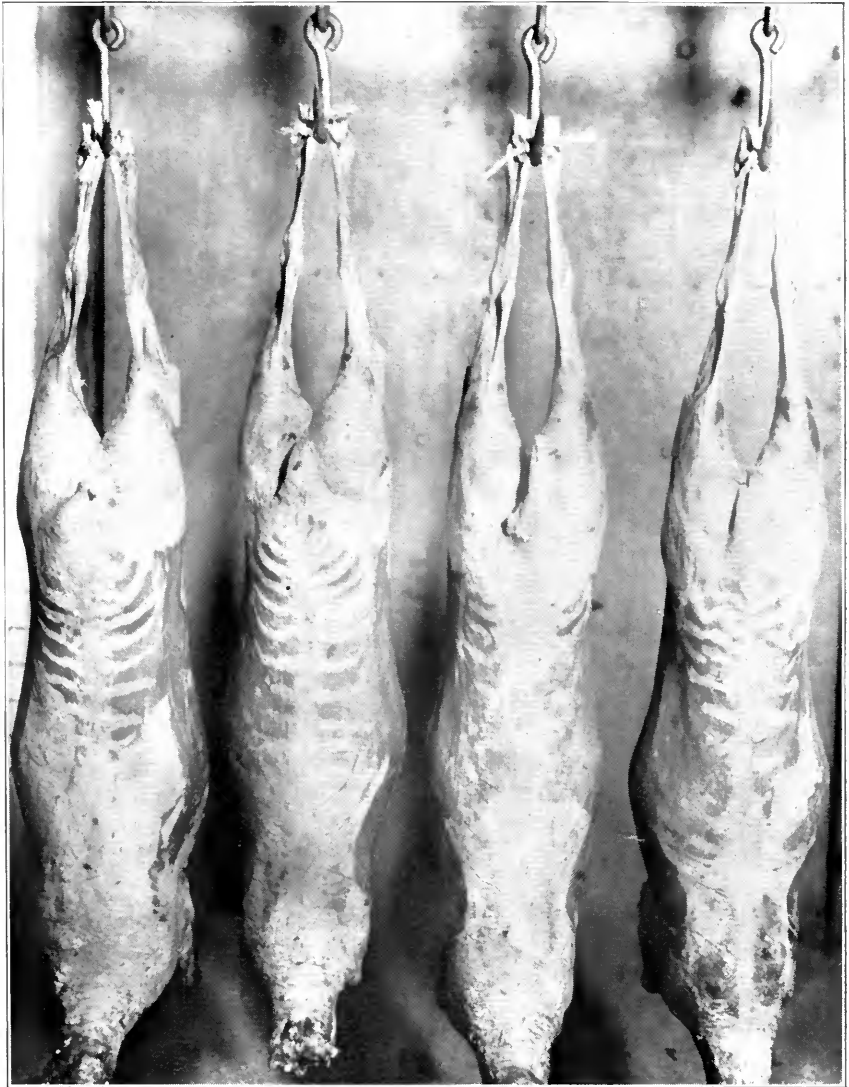


FIG. 45. LAMBS.

Choice.

Good.

Medium.

Common.

small lean chops and legs of lamb, together with the fact that lamb is superior to mutton in tenderness and flavor.

The majority of dressed lambs are known as "spring lambs" from June until December; after August, however, they are frequently quoted simply as *lambs*. Frozen spring lambs are sold regularly, tho in relatively small numbers, during the winter and spring. The terms, "yearling lambs" and "fall lambs" are frequently used during the spring and summer with reference to lambs approaching yearlings in age but similar to spring lambs in size and shape. These terms, however, are used somewhat loosely by the trade and do not denote distinct subclasses.

The grades of lambs are *choice*, *good*, *medium*, *common* and *culls*. The grade is determined more largely by quality and weight and less by form and covering than is the case with carcass mutton. Quality of flesh and bone is especially important for the reasons stated in describing veal. Weight is a matter of much significance in selecting lambs and a decided preference is shown for weights well below those of yearlings because the latter are to some extent sold as heavy lambs. Dressed lambs seldom exceed 50 pounds in weight but no distinct line can be drawn between the two classes either in weight or degree of maturity. The minimum weight of lambs is about 15 pounds and few carcasses weigh less than 20 pounds. Form and covering are of most importance in the *choice* and *good* grades. Plump legs, full, wide backs and loins and thick flanks and breasts are the principal points by which form is judged. In covering, lambs are not as fully developed as yearlings. The back and loin should be well covered but much less fat is found especially on the legs and ribs than in other classes of dressed sheep. *Medium* and *common* lambs are, as a rule, caul-dressed; the *choice* grade is principally round-dressed and *good* lambs either caul or round. All grades of caul and round lambs are quoted both *pluck in* and *pluck out*.

Choice lambs are short, compact and thick, with flesh of the lightest color and finest grain, small bones, and an even covering of white fat. Shape, covering and general appearance of carcass are especially important in choice lambs because they are generally round-dressed. Short, broad, plump legs and full, thick backs and loins contribute most to the desired form since these are the high priced cuts of the carcass. Lambs which are slightly too long and rangy even tho choice in quality and finish are barred from this grade because they resemble yearlings in appearance. Too thick a covering of fat is seldom found in the lamb class. The weights of *choice* lambs are 35 to 50 pounds and the bulk range between 40 and 45 pounds. Chops and legs cut from lambs heavier than 45 pounds are too large to suit the average trade

and such lambs are also in closer competition with yearlings, hence they seldom grade higher than *good*. The supply of *choice* lambs is largest during the summer and fall months. See Figs. 45, 46.

Good lambs include a wider range of quality and weight than *choice* lambs and differ from the latter chiefly in the matter of covering. Many carcasses sold as *good* lambs are on the border between lambs and yearlings. The weights of this grade of lambs range from 35 to 50 pounds. The heavier selections weighing 45 to 50 pounds are round-dressed and 35 to 45 pound lambs are principally caul-dressed. The latter are largely used in the eastern shipping trade. See Figs. 45, 46.

Medium lambs are those which are either too rangy in form, coarse and plain in quality or too deficient in covering to bring the price of a good lamb. Many of this grade are too heavy in "barrel" and others are extremely wasty in kidney-fat. The grade also includes some bucky lambs of good quality and covering which are chiefly found in the heavy weights up to 50 pounds. The bulk of the *medium* lambs average 30 to 40 pounds and are caul-dressed. See Figs. 45, 46.

Common lambs are too deficient in flesh and in covering of fat to be suitable for chops or legs of lamb altho they are used on the block in the cheaper classes of trade. They often possess some outside covering but it is confined entirely to the back and loin. This grade also contains a few bucky lambs weighing as high as 45 to 50 pounds but the bulk of the grade weigh 25 to 30 pounds and a few as low as 20 pounds. See Figs. 45, 46.

Cull lambs are of quality similar to that of canner ewes, excepting that the flesh is less dark colored and is usually somewhat more abundant in proportion to the bone. They are entirely devoid of fat and are of the most inferior form and quality. Lambs of this grade are taken by retail markets located in poor city districts and sold for stewing purposes. The weights are 15 to 25 pounds, with the bulk included between 20 to 25 pounds.

"GENUINE" SPRING LAMBS

The term *genuine* is used during April, May and June to differentiate early spring lambs from other lambs which resemble "springers" in quality and weight, such as frozen lambs stored since the previous summer, and light "yearling lambs". It is gradually dropped after the arrival of the regular supply of spring lambs in May and June.

For several weeks after the beginning of the season (about April 1,) "genuines" are dressed "pelt on", the head not being removed, brisket not split and the carcass opened only sufficiently to remove the offal (Fig. 47). The earliest offerings are known as

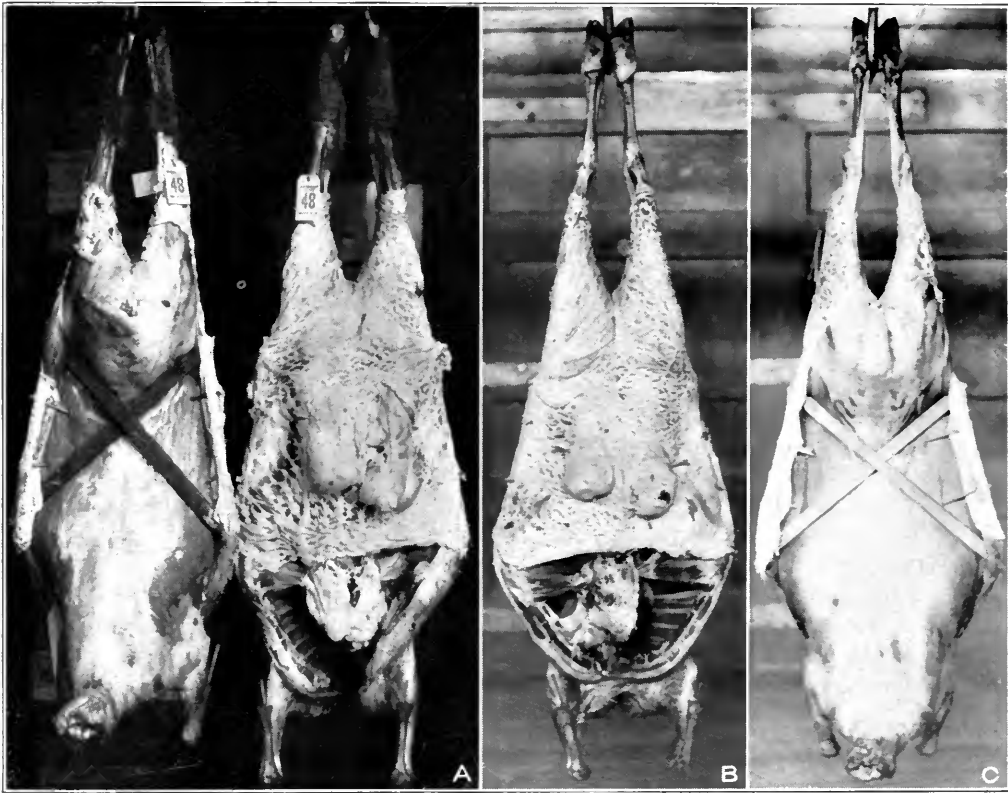


FIG. 46a. SPRING LAMBS.

Choice

Good.

Easter lambs, a large proportion of which are consumed by the local Jewish and Greek population, who use them in connection with religious customs. For this trade, dressed lambs must show the effects of shelter, care and milk feeding, indications of which are thick, white flesh on the breast, flanks and legs, a good covering of fat on the kidneys and lining the crotch, fine shanks, red ribs and soft, white hench-bone. The carcass weight varies from 30 to 50 pounds, gross; the general run weigh 35 to 45 pounds and the most desirable weights are 35 to 40 pounds. Carcasses weighing less than 30 pounds are discriminated against, because their net round-dressed weight is less than 20 pounds, and quarters lighter than 5 pounds are too small to suit the retail trade. The variation in this class of lambs is not sufficient to separate them into distinct grades, altho prices vary somewhat according to weight and quality.

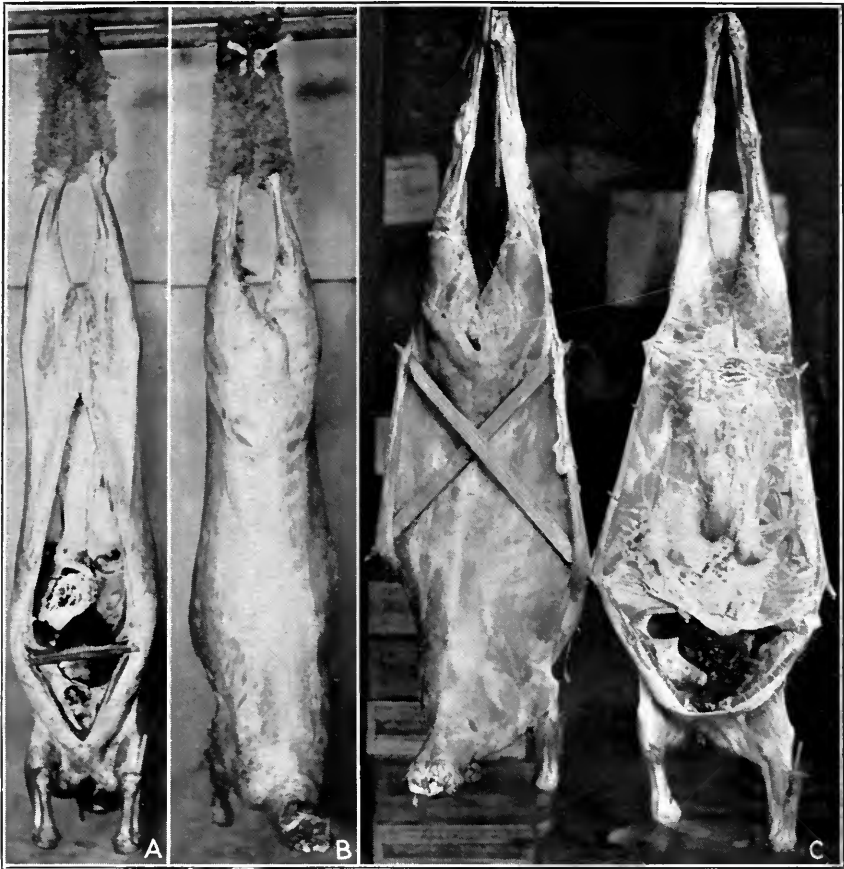


FIG. 46b. SPRING LAMBS.

Medium.

Common.

After May 1 to 15 "genuines" are round- and caul-dressed, except special orders of pelt lambs. As the season advances more variation in quality and weight is found, and by July 1, this class is identical with the various grades of spring lambs described above. Average weights of caul- and round-dressed "genuines" are 20 to 35 pounds. They are usually dressed with the wool or "stockings" on hind shanks, and plucks in.

"Genuine" spring lambs are sold both per carcass and per pound in wholesale markets, early pelt-dressed lambs being most frequently quoted by the carcass. The principal demand for this class of lambs is among hotels, restaurants and clubs of the highest class. In retail markets they are generally sold by the quarter, and when cut into chops are sold by the cut rather than by the

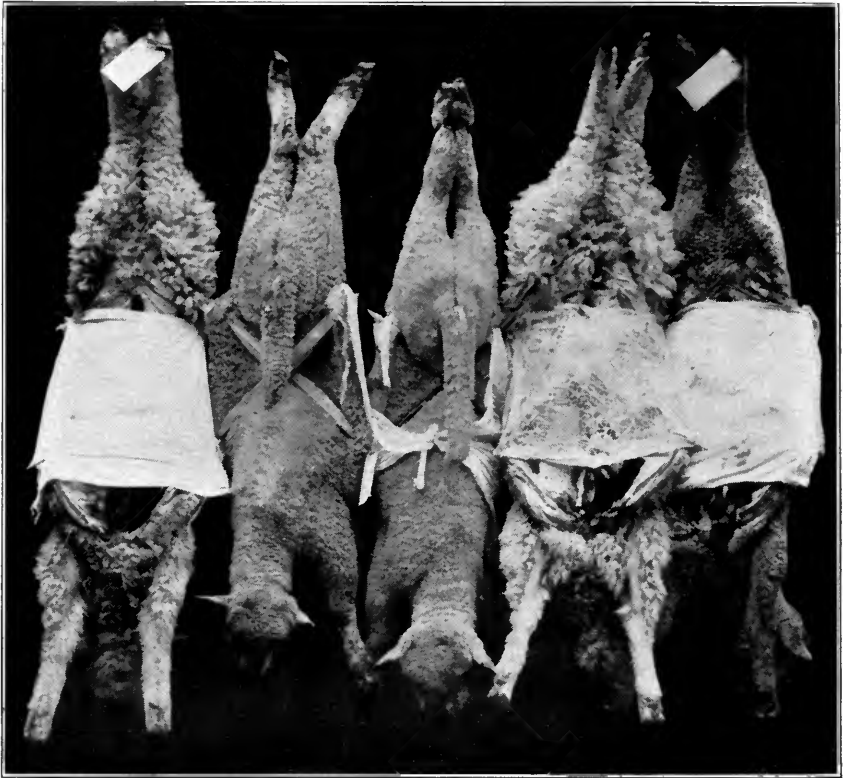


FIG. 47. "GENUINE" SPRING LAMBS.

pound. For this reason medium- and light-weight "genuines" frequently sell as high per carcass as heavy ones of the same quality. The supply of this class of lambs handled at Chicago is principally shipped from southern markets, especially Louisville and St. Louis. The number is comparatively limited and forms but a small percent of the supply of lambs marketed annually.

During July and August large numbers of choice, light spring lambs which resemble "genuines" are dressed "pelt on" and frozen to be held for the early lamb trade of the following winter and spring. They sell at about 25 percent below the price of "genuine springers".

WINTER LAMBS

Winter ("hothouse" or "incubator") lambs are light, young lambs which precede genuine spring lambs in the market by two or three months, being in season from January until May and a small number being available for Christmas trade. They are similar to

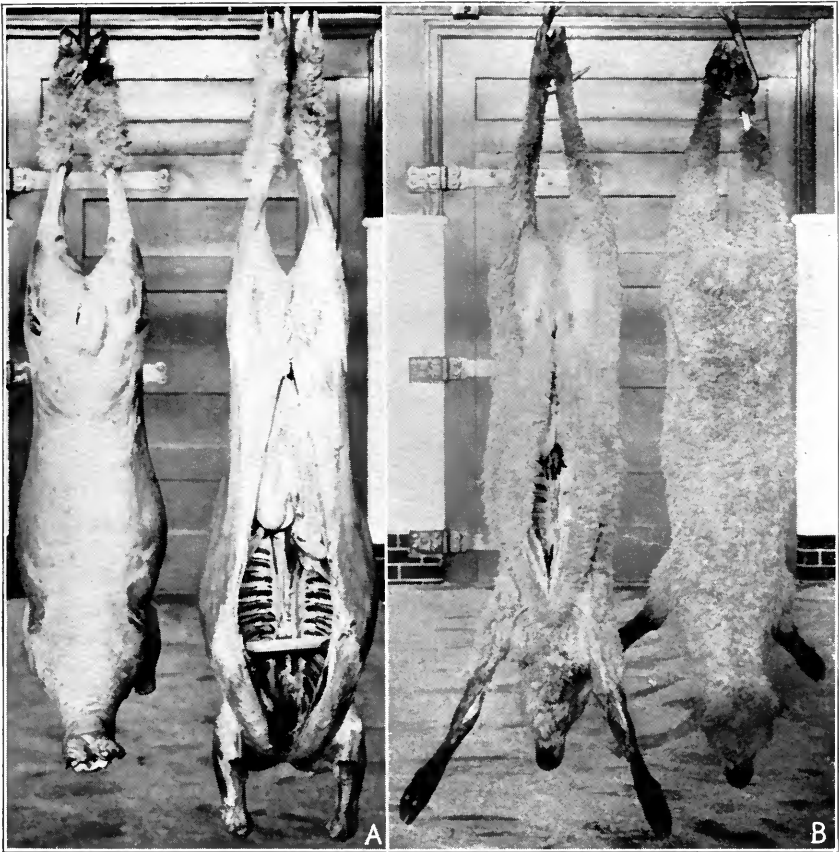


FIG. 48. WINTER LAMBS.

early spring lambs but are of lighter average weights and show better development in proportion to their age. They consist principally of native country-dressed lambs, six or seven weeks old, shipped from Wisconsin, Michigan and Illinois. They weigh 20 to 45 pounds and the bulk, 30 to 40 pounds, gross. They are dressed "pelt on" and "pluck in", with two back-sets and the caul placed over the belly. They are principally shipped to produce commission firms or direct to hotels, restaurants and clubs instead of passing thru the large wholesale markets. Being marketed in advance of the spring lamb season they sell at high prices and are taken by the most select trade. The few that are sold in retail markets are sold by the quarter and not by the pound. Frozen lambs put in storage at different seasons and in various sections of the country are also substituted for winter lambs, and sell at the same relative

discount as frozen spring lambs. Late winter lambs and early "genuines" are practically identical classes. See Fig. 48.

KOSHER SHEEP AND LAMBS

Like calves and cattle, sheep and lambs sold to Jewish patrons are slaughtered, inspected and dressed under prescribed regulations (p. 188). The rack (12 ribs) only is used by this trade. Heavy mutton is not in demand in Jewish markets, and medium to choice lambs are the grades generally sold for this purpose. (See Easter lambs, p. 238).

SHIPPING MUTTON AND LAMB

The Chicago shipping trade in dressed sheep and lambs goes principally to cities in the eastern seaboard states. The largest percent of this trade consists of lambs. The mutton that is shipped consists of choice, good, and medium wethers, ewes, and yearlings. New York, Philadelphia and Boston are the leading markets to which heavy mutton is sent from Chicago.

Shipping lambs are dressed and graded according to the demands and customs of the various markets to which they are sent. The principal styles of shipping lambs recognized by the trade are as follows:

Regular, custom or Washington shipping lamb. Plain cauldressed, pluck out. Medium and good grades, 35 to 40 pounds average. (Shipped to Washington and other cities and used locally). See Fig. 46a.

New York lamb. Pluck in, caul wrapped about legs in two pieces with heavy end upward, balance of caul placed from legs to kidneys. Medium and good grades, 35 to 40 pounds.

New York R. D. lamb. Round-dressed, pluck in. Choice lambs, 40 to 45 pounds.

Boston or B. B. (break-back) lamb. Ribs cracked and turned back, back broken, one straight back-set, shanks not folded, pluck out. Choice lambs, 40 pounds average. See Fig. 49. (Boston-style sheep are plain-dressed, but with the ribs cracked and turned back, and a spread-stick inside at the flanks. See Fig. 49.)

Philadelphia lamb. Pluck dropped thru caul, shanks folded. Medium to good grades, 35 to 40 pounds. See Fig. 49.

Baltimore lamb. Caul placed with heavy end upward, one back-set, pluck out. Medium lambs, 30 to 35 pounds.

Providence lamb (E. T. or Newport). Ribs cracked and turned back, 2 back sets, caul placed about fore quarters and around the back, pluck out. Choice lambs, 40 to 45 pounds. See Fig. 50.

Connecticut lamb (or New Haven). Round-dressed lamb,

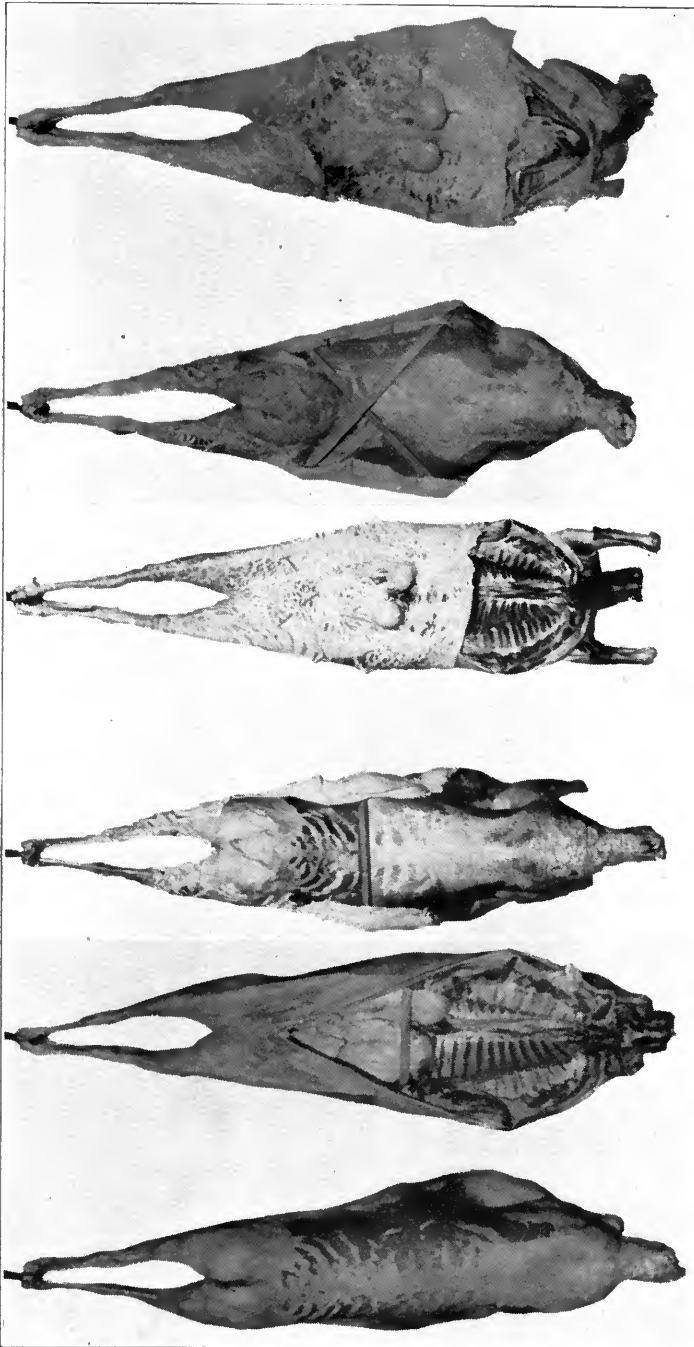


FIG. 49. SHIPPING MUTTON AND LAMBS.
Boston-Style Lambs.

Philadelphia-Style Lambs.

Boston-Style Sheep.

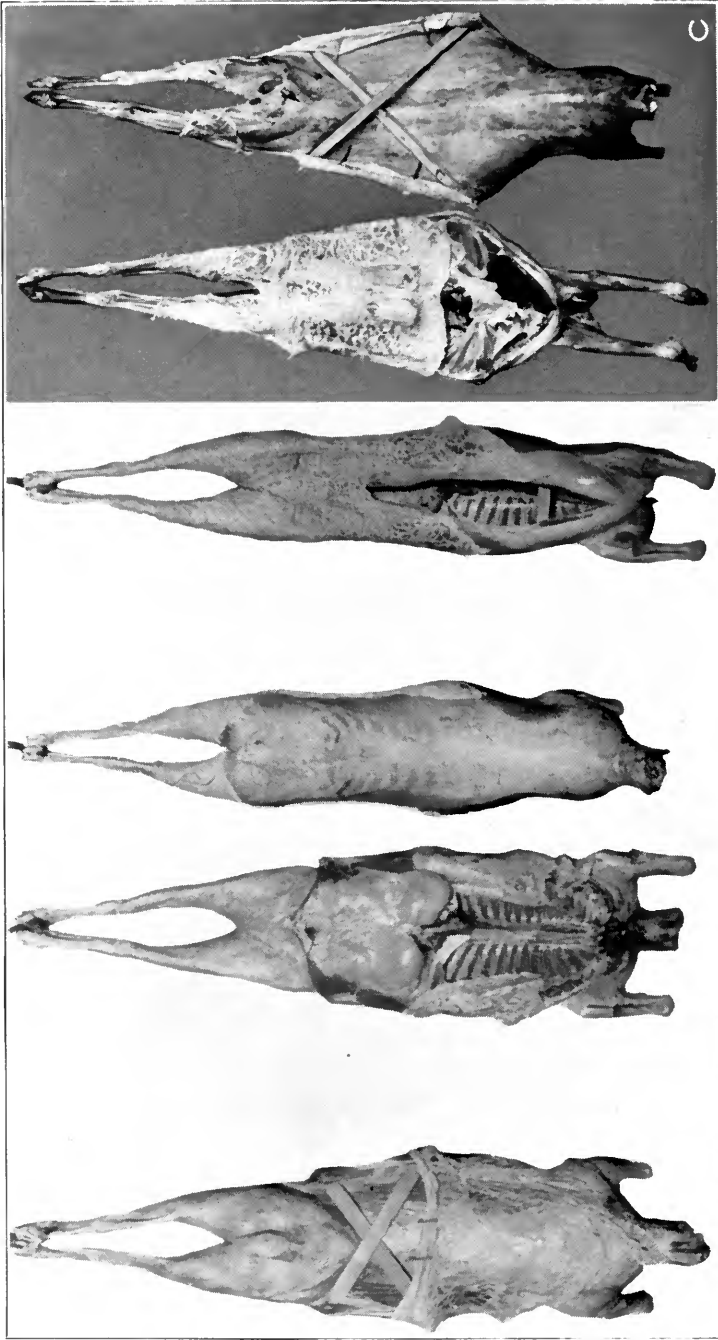


FIG. 50. A, PROVIDENCE-STYLE LAMBS. B, CONNECTICUT-STYLE LAMBS. C, GOATS.

caul wrapped around hind legs and over belly with heavy end upward. Good lambs, 35 to 40 pounds. See Fig. 50.

Dressed sheep and lambs are not regularly exported from this country.

GOATS

Dressed goats are occasionally sold in connection with mutton and lambs and are frequently substituted for them, especially in retail markets. They are comparable in form, quality and finish with the lowest grades of Western sheep. Long shanks, coarse, dark flesh, long neck and thin caul, however, render them quite easily distinguished from sheep carcasses. They are not quoted in distinct grades. See Fig. 50.

MUTTON CUTS

About one-half the supply of dressed wethers, ewes and yearlings in large wholesale markets is sold as mutton cuts, consisting principally of saddles and racks as illustrated in Fig. 51. The carcass is usually divided between the twelfth and thirteenth ribs, yielding about 49 percent saddle and 51 percent rack. Subdivisions of the saddle and rack are quoted as wholesale cuts to some extent. The cuts derived from the saddle are the leg and loin, separated at the hip-bone and including two-thirds and one-third, respectively, of the weight of the saddle. The rack is made into a stew and a short rack by separating ten ribs (the third to twelfth inclusive) from the shoulder and breast as shown in the illustration. The short rack includes two-fifths and the stew three-fifths the weight of the rack. The short rack has the highest market value per pound of the wholesale cuts, and the legs, loin and stew are valued in the order named. Legs of mutton and lamb were formerly quoted and sold at higher prices than the ribs, but retail demand for the latter has during the last ten or fifteen years gradually overtaken and exceeded the demand for legs.

Grading Mutton Cuts

The grades of mutton cuts are *choice*, *good*, *medium* and *common*. Cuts of these grades correspond in shape, quality, covering and relative weight to the same grades of carcass mutton; and the descriptions of the latter will serve to indicate the more important differences that exist between the various grades of saddles and racks. The principles governing the grading of beef cuts (pp. 190 to 194) also apply in the main to the wholesale cuts of mutton, and should be studied in this connection. Thickness and quality of flesh and depth of covering are especially important, and the degree of each is readily determined by examining

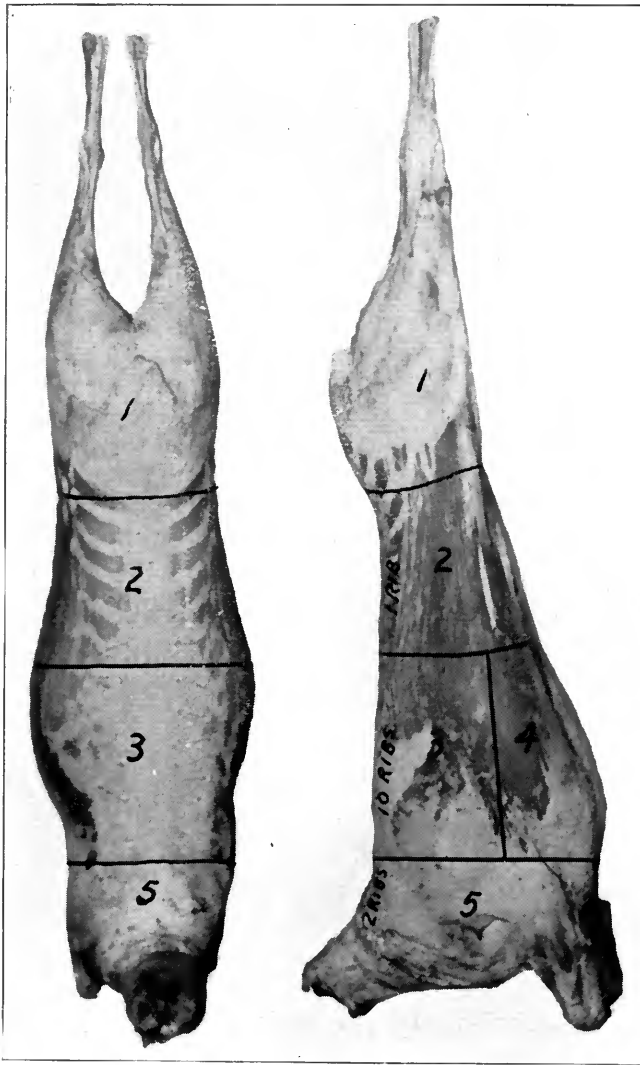


FIG. 51. MUTTON AND LAMB CUTS.

- | | | | | | |
|-------------|-------------|-------|------------|-------|--------|
| 1, 2. | Saddle | 1. | Leg | 4. | Breast |
| 3, 4, 5. | Rack | 2. | Loin | 5. | Chuck |
| 1, 2, 3. | Long saddle | 3. | Short rack | 4, 5. | Stew |
| 2, 3, 4, 5. | Body | 2, 3. | Back | | |

the "eye of mutton" (the lean flesh covering the ribs and adjacent to the back-bone). It should be deep and well-rounded rather than flat. The color of lean varies from a dull brick red to dark red, the former being preferable. Fine fibre or grain, smooth, velvety surface and firm consistency of flesh are characteristics of choice mutton cuts. Marbling, or mixture of fat within the lean, is less developed and of less importance in mutton than in beef cuts.

SADDLES

Choice, good, medium and common saddles are illustrated in Fig. 52. It is seen that in shape, thickness and proportion of fat to lean the cuts are similar to the corresponding grades of carcass sheep. About one-fourth inch of fat over the loin is considered most desirable for choice saddles of medium weight. Since the legs make up two-thirds the weight of a saddle and sell at about one-sixth higher price per pound, the importance of that portion of the saddle is apparent. Aside from thickness and shape of leg and loin, saddles may grade low by reason of deficiency in general quality, as coarse bone or soft, uneven covering. The proportion of kidney-fat, its color and brittleness are also important factors. It is customary in most markets to quote mutton saddles by classes, as wether, ewe and yearling saddles, these being differentiated as explained in connection with those classes of carcass mutton. Weights of saddles commonly handled are 20 to 50 pounds, and the majority average 20 to 30 pounds. Choice and good saddles are, on the whole, somewhat heavier than medium and common grades.

Only a small percentage of saddles are cut up in wholesale markets. A "long saddle" consists of a regular saddle and short rack in one piece; in other words, it is the portion of a carcass that remains when a stew or chuck is cut from it. Legs and loins are cut principally from good and choice saddles.

RACKS

Regular or "market" racks are graded *choice, good, medium and common* (Fig. 52). Thickness and quality of flesh, proper thickness of covering on the back and ribs, and absence of coarseness are essential points in grading racks. The "eye of mutton" is of the same significance as in the case of saddles. The rib cut, or short rack, tho only two-fifths the weight of the rack, represents about two-thirds of its value and must be considered accordingly in grading. Quality and proportion of bone are indicated by the ribs and shanks, as in carcass mutton. The shape of neck indicates whether the rack is from a wether, ewe or buck. The range of weights is the same as that of saddles, viz., 20 to 50 pounds, with the bulk from 20 to 30 pounds.



FIG. 52. A, MUTTON SADDLES. B, MUTTON RACKS. (CHOICE, GOOD, MEDIUM, COMMON.)

Short or "hotel" racks, or ribs, are made from medium to choice racks and graded similarly to them. They are cut 8 to 12 ribs long in various markets and in some cases are made "shoulder on," but usually contain only 9 or 10 ribs. They are quoted both "blade in," or regular, and "blade out" or "shoulder raised", a premium of one cent per pound being charged for the latter. As explained in describing beef ribs, the shoulder blade is a valuable indication of the age of the carcass and quality of the bone, being a white soft cartilage in young, well-fed sheep and gradually changing to bone according to the age and development of the animal. The high value of the short rack compared with other parts of the carcass is due to the demand for rib chops, which exceeds that for any other cut of mutton. Short racks are largely used by hotels, restaurants, dining cars, etc., for "French" chops, which consist of a rib chop with the end of the rib trimmed clean of flesh and fat, leaving only the "eye of mutton" with its covering and bone.

A mutton stew (chuck, wing, slug or rattle) is the shoulder, breast and shank in one piece, including nearly one-third of the carcass weight and two-fifths of the rack. The more important factors in determining their grade are thickness, grain and color of flesh and quality of bone indicated by the ribs, shanks and shoulder blades. This is the cheapest cut of the carcass, frequently selling at less than one-third the price of short racks and one-half that of legs of the same grade.

Fore quarters or "fores" are sometimes made from market racks by splitting them thru the back-bone. They are graded in the same manner as racks.

BACKS

Backs or "long racks" consist of a loin and short rack cut in one piece. They can be cut entirely into loin and rib chops, hence are well adapted to the use of restaurants, dining-cars, steamboats and high-class city retail markets. They are made chiefly from good and choice sheep. When cut in this style, mutton carcasses yield about one-third each of back, legs and stew.

A mutton body consists of a market rack and loin in one piece; in other words, the carcass with legs cut off. Sheep are not extensively cut in this fashion in wholesale markets.

LAMB CUTS

Lambs are more largely sold in the carcass than sheep, owing both to their smaller size and to the greater relative demand for the cheaper cuts of lamb than of mutton. It is estimated that one-fourth to one-third of the wholesale lamb trade consists of cuts.

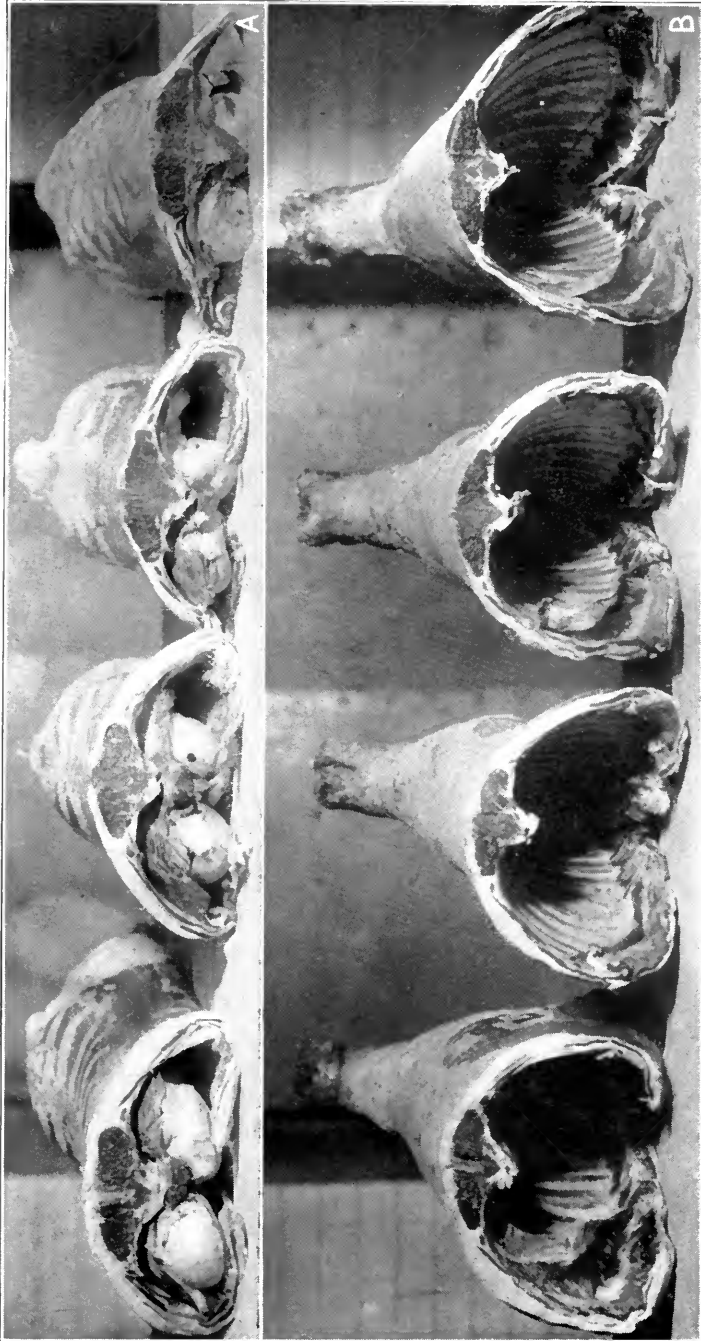


FIG. 53. A, LAMB SADDLES. B, LAMB RACKS. (CHOICE. GOOD. MEDIUM, COMMON.)

The methods of cutting and proportions of the various cuts are identical with those of mutton. Lamb saddles and racks, however, are still less commonly cut up than those of mutton.

The grading of lamb cuts is also similar in general to that of mutton cuts. About one-eighth inch of fat over the loin and ribs is desired in choice lambs, and a marked variation in either direction from this amount throws the cut into one of the lower grades according to the degree of excess or deficiency. The color of flesh in cuts of lamb is a lighter or more pinkish red than in mutton. The depth, grain and firmness of flesh and quality of bone are points of prime importance. As in mutton cuts the short rack has the highest market value, followed by the legs, loin and stew.

SADDLES.

The four standard grades of lamb saddles are illustrated in Fig. 53. The leg is the most valuable portion of the lamb saddle, representing about three-fourths of its total market value, consequently its fullness and covering are of great importance in determining the grade of a saddle. Kidneys of medium size, white and brittle, are required in choice saddles, together with the proper degree of finish as indicated by covering over loin and rump and the cod fat. Saddles are cut both from round- and caul-dressed lambs and principally from good to choice grades. Caul saddles are quoted below the price of round saddles of the same grade, and as a rule are made from a lower grade of lambs. Lamb saddles average 15 to 25 pounds and the bulk 18 to 22 pounds.

Lamb legs are also sold to some extent. They are taken principally from carcasses that are cut into legs, backs and stews, or legs and bodies. They are chiefly of good and choice grades and average 10 to 16 pounds per pair. A few good and choice loins are sold in most markets, but the proportion of saddles cut into legs and loins is much smaller than is true of mutton.

RACKS

Racks are graded *choice*, *good*, *medium* and *common* as illustrated in Fig. 53. Thickness and quality of flesh, especially over the ribs, depth and evenness of fat, and quality of bone as indicated by the ribs and shanks are the more important points considered. Like mutton racks, three-fourths of their value is contained in the short rack or rib cut, which yields the kind of chops that are most in demand.

Hotel racks and stews are made from market racks in the same manner as the corresponding cuts of mutton. They are graded as explained under mutton cuts, but a much smaller proportion of lamb than of mutton racks is thus handled. Fore quarters are also quoted but a still smaller proportion of "fores" than of other rack cuts is made.

BACKS

Backs or "long racks" of lamb, including the loin and short rack, are also made as in mutton. They may be made from any grade of lamb carcasses but are cut principally from the better grades. Lamb bodies, or carcasses from which the legs have been cut, are quoted but relatively few are sold.

PORK

Hog products may be described under three heads: (1) *Dressed Hogs*, (2) *Pork Cuts* and (3) *Lard*. As a rule, not more than one or two percent of the number of hogs slaughtered in large packing houses are sold as whole carcasses. Approximately three-fourths of the trade in hog products consists of various cured meats and fresh cuts, the remainder consisting principally of lard and a small percentage of sausage and canned meats. Further, fresh pork is of much less importance, relatively, than fresh beef or mutton, only about one-fifth of the domestic trade and five percent of the export trade in pork products (other than lard) consisting of fresh meat. Thus the classification of pork consists largely of cured and manufactured products, the number and variety of which renders the outline of this subject quite complex.

DRESSED HOGS

The classification of hog carcasses is based on the uses to which they are adapted, or the products into which they can be converted. The classes generally recognized and average weights included in each are as follows:

	CARCASS WEIGHTS
Smooth Heavy or Heavy Loin Hogs.....	240 to 400 lb.
Butcher or Light Loin Hogs.....	160 to 240 lb.
Packing Hogs	100 to 400 lb.
Bacon or Marked Hogs	90 to 170 lb.
Shippers	100 to 200 lb.
Pigs	20 to 100 lb.

Different styles of dressing are characteristic of the different classes of carcasses except heavy and light loin hogs, and shippers and pigs. Dressed hogs of all classes are cut open along the underline and thru the aitch-bone and brisket, but the method of splitting and trimming varies with the class, as follows:

Loin hogs are split down thru the centre of the back-bone ("loin-split" or "centre-split") in order that pork loins may be cut from the sides. They are dressed "packer style", i. e., head off* leaf out and hams faced.† See Fig. 54.

*The jowls or cheeks are left as part of the carcass.

†Facing consists in trimming a strip of fat from around the face of the ham, so as to expose a larger lean surface.

Packing hogs are usually split like loin hogs, but are sometimes split on one side of the back-bone, making a "hard" and "soft" side. In either case they are dressed with head off, leaf out and hams faced.

Bacon hogs are usually cut ("marked") with a knife on each side of the back-bone, then split on one side and the back-bone taken out, making sides suitable for English bacon cuts. The head is taken off and leaf out, and the hams are either faced or not, according as they are intended for short-cut or long-cut hams. See Figs. 58, 59.

Shippers and pigs are dressed "shipper style", i.e., with head on, leaf in, back-bone not split and hams not faced. See Fig. 60.

Only shippers and pigs are extensively sold as dressed hogs. The other classes are cut up directly after being chilled, except relatively small numbers of butcher and packing hogs that are handled by jobbers or sold to retail dealers for fresh use.

Grading Dressed Hogs

The grades of hog carcasses are much less numerous and complex than those of carcass beef or mutton, owing to the greater variation in the latter with respect to age and general development. Standard grades are recognized only in the bacon and packing hog classes. In a broad sense, however, the six general classes may be regarded also as grades, since they are differentiated largely by shape, finish, quality and weight as well as by styles of dressing.

The shape desired in loin and packing hogs is great width of side and back in proportion to length of body, straight, even lines and well-filled hams and shoulders. In bacon hogs, length of side is more important, with less width and thickness of back in proportion to that of the side than in the grades of fat hogs.

Finish is indicated by the depth and evenness of fat covering the carcass, especially along the back and over the sides; also by the amount and quality of leaf fat.* It is essential that the fat be white and firm. The depth of covering and proportion of leaf fat desired are described and illustrated in connection with the various classes.

Quality implies firm, bright, smooth-grained flesh and solid, white fat evenly distributed over the carcass; smooth, thin, mellow skin free from wrinkles, blotches or bruises; moderately small, fine shanks and head; soft, red chine-bones, back-bone and brisket; and an absence of coarseness in general. Points of special importance in selecting dressed hogs are the development and quality of loins and sides, and the size, shape, firmness and

*The leaf is the internal fat of the carcass. It includes the kidney fat and extends down to the flanks and skirt (diaphragm).

covering of the hams. Coarse or extremely large shoulders, neck and jowls, are indications of stagginess, and "seedy"* sows are classified as packing hogs because of their coarse quality.

The importance of weight in grading dressed hogs varies according to the class, as will be observed in the weights given on page 252 and in the following descriptions. In general, weight is a very important factor, and in the case of loin hogs it determines not only the grade but also the class to which a carcass belongs.

SMOOTH HEAVY OR HEAVY LOIN HOGS

These are prime smooth hogs, either barrows or good, clear (not seedy) sows, weighing 240 to 400 pounds, with from four to six inches of fat on the back; thick, wide, level sides without depressions in the back; heavy hams, filled out even with sides, full at the rump and well rounded down toward hocks, without

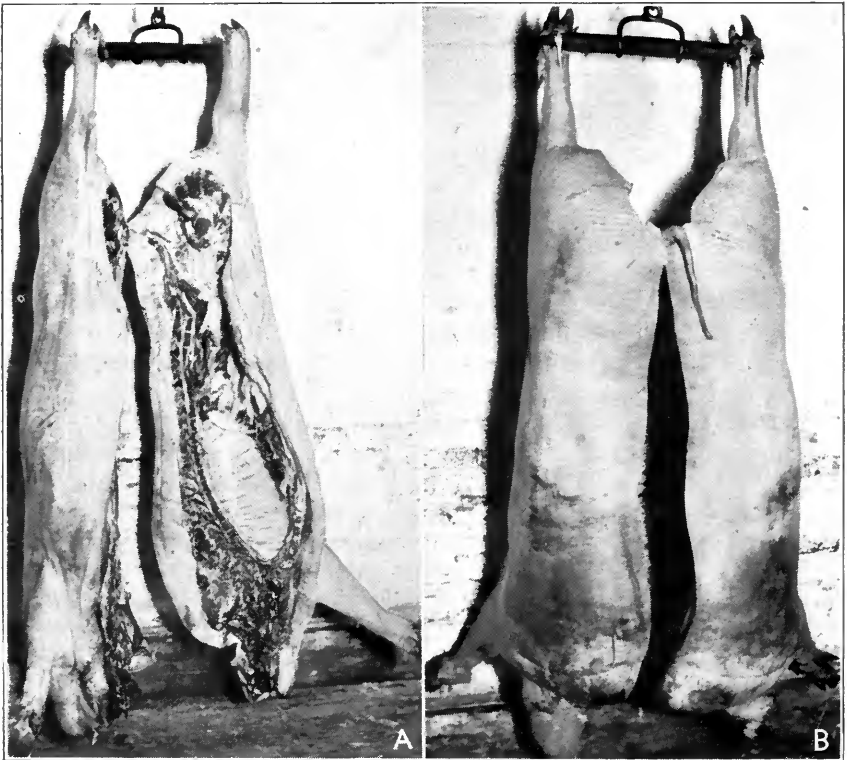


FIG. 54. SMOOTH HEAVY HOG.

Inside.

Outside.

* This term refers to the nipples or teats of sows that have borne pigs or reached an advanced stage of pregnancy. See Fig. 56.

wrinkles or flabbiness; smooth shoulders; short, full neck; and full but not coarse jowls. The skin must not be thick, hard, nor wrinkled. The flesh and fat must be deep, firm and even, the flesh bright-colored, the fat white and bones not coarse. As their name indicates, such hogs are especially suitable for making heavy loins, the remainder of the side being made into a heavy fat back and dry-salt belly. However, under certain market conditions they are cut into the same products as heavy packing hogs. The hams are usually skinned and the shoulders cut into picnics, butts and plates. Hogs of this class are a very small percent of the supply. See Fig. 54.

BUTCHER OR LIGHT LOIN HOGS

The term "butcher" refers to "butcher shop" or retail family trade. A large proportion of the fresh pork sold in retail markets is pork loins, which are cut into chops and roasts; hence light loin or "pork loin" hogs are those from which these cuts

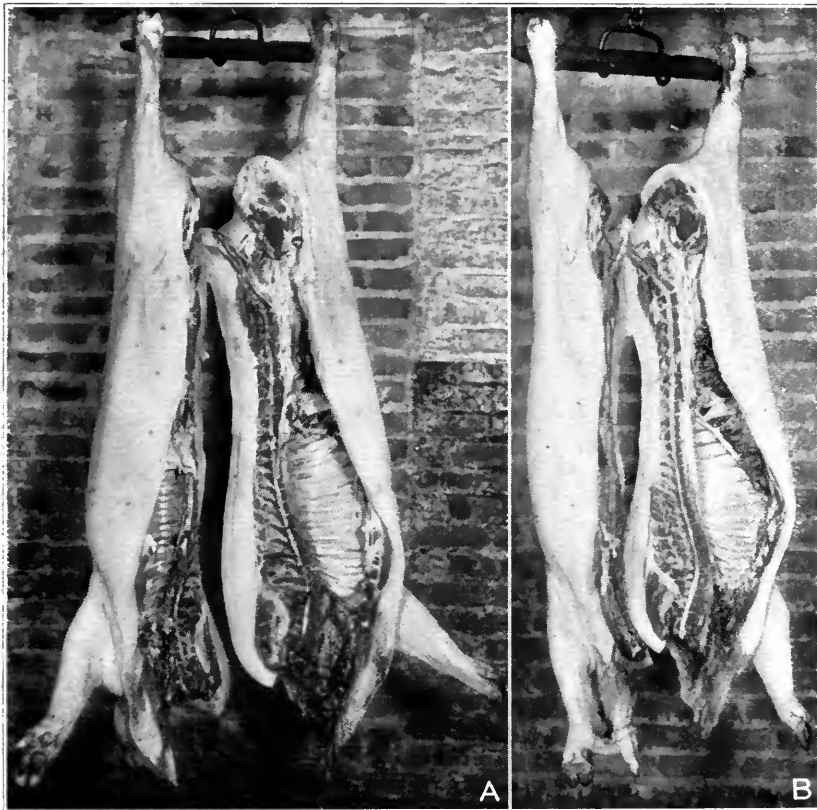


FIG. 55. BUTCHER HOGS. A, HEAVY. B, LIGHT.

can be obtained to best advantage. To yield loins of the proper size and quality, a hog carcass should weigh about 160 to 240 pounds and have the same shape, smoothness and general quality described above with reference to heavy loin hogs. Thick, firm flesh, smooth, soft skin and solid, white fat are especially important. The covering of fat should be two to four inches thick on the back. This class is composed of barrows and smooth, clear sows. The weights most preferred for butcher hogs are 200 to 220 pounds. They are principally cut up by packers, the loins being sold to retail dealers or jobbers. Besides loins, fat backs, clear bellies, extra ribs and extra short clears are commonly made from sides of butcher hogs. The hams are cut short and the shoulders principally made into picnics, New York-cut shoulders and Boston butts. In some instances, carcasses of this class are sold to retail markets for fresh trade, in which case they are dressed either "head on" or "head off" as ordered. See Fig. 55.

PACKING HOGS

This class includes mixed hogs of all weights which are too coarse in quality, rough in shape or soft and uneven in finish to

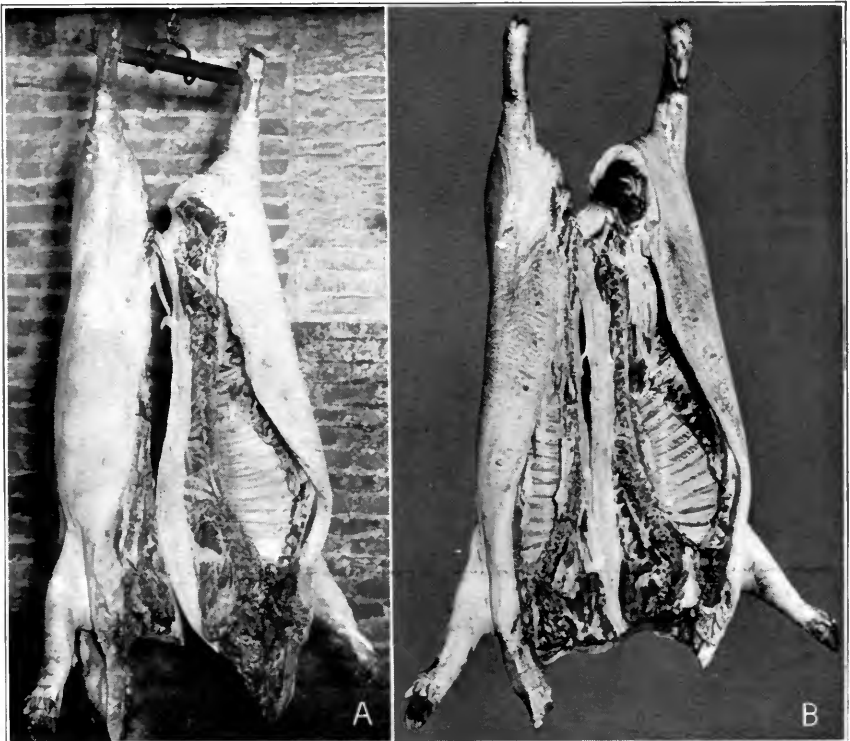


FIG. 56. PACKING HOGS (SOWS). A, HEAVY. B, MEDIUM.

be suitable primarily for fresh pork products or smoked meats and are therefore principally packed in such forms as barreled pork and dry-salt meats. About one-half the hogs handled in Chicago packing houses belong to this class.

Heavy Packing Hogs, also known as Rough Heavy or Mess Pork Hogs, consist of rough and seedy sows, coarse barrows, boars and stags averaging 240 to 400 pounds. All heavy hogs that are too rough to be classed as loin hogs are included in this grade. Defects common to these carcasses are thick, rough and wrinkled skin, dark-colored and coarse-grained flesh, soft, oily fat, large bones and carcass bruises. (Figs. 56, 57.) They are more largely cut into short ribs and mess pork, and less into loins, fat backs and bellies than Heavy Loin Hogs, and consequently are more frequently "marked" and side-split altho at times

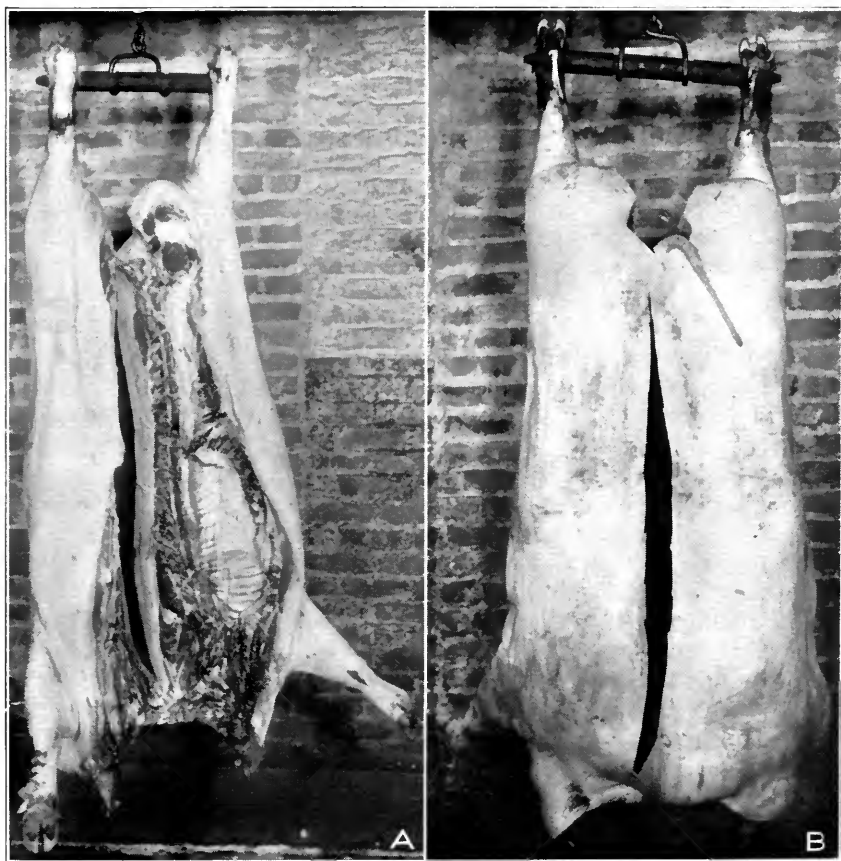


FIG. 57. PACKING HOG (BOAR).

Inside.

Outside.

a large proportion of them are loin-split and pork loins taken out. The hams are sweet pickled and shoulders made into picnics and Boston butts.

Medium Packing Hogs are sows and barrows averaging 200 to 240 pounds that are inferior to butcher hogs in quality; they also include a small proportion of stags and boars. (Fig. 56.) The cuts made from this grade are dry-salt sides, mess pork, clear backs, dry-salt and "English" bellies, pork loins, short-cut hams, and New York cut and picnic shoulders.

Light Packing Hogs are mixed hogs of 100 to 200 pounds weight that are too deficient in shape, quality and finish to be classified as either Bacon, Butcher or Shipper hogs. This grade consists largely of light sows. They are cut into prime mess pork, short clear backs, clear bellies, short-cut hams, and picnics, New York and skinned shoulders.

BACON OR MARKED HOGS

Bacon hogs are those that are suitable primarily for sugar-cured breakfast-bacon bellies and "English" meats. Since such meats must be comparatively lean, firm and of good quality, the leading features of bacon hogs are long, deep, smooth sides with a light, even covering of fat over the entire carcass and especially uniform on the back and sides. The hams should be full but lean and the shoulders light and smooth. The flesh must be firm and not "watery", the fat solid and the carcass sufficiently mature to insure proper curing. Hogs which fulfil these conditions weigh 90 to 170 pounds dressed. Low grades of bacon are made from pigs as light as 60 or 70 pounds, but the most desirable weights are 120 to 150 pounds. They consist principally of barrows, but for most grades of bacon smooth, clear sows that resemble barrows in general quality and finish are used to some extent. Only a small percentage of the dressed hogs handled at Chicago are of this class. The products principally made from them are "English" middles, backs and bellies, domestic breakfast-bacon bellies, long-cut and short-cut hams. Bacon hogs vary from choice to common in quality, finish and shape, and altho no fixed grades are universally recognized among packers, they are usually designated as *choice*, *good* and *common*, respectively.

Choice bacon hogs must be evenly fleshed and covered with a smooth layer of fat over the loin, shoulders and sides. Firm flesh, solid, white fat, and a white, smooth skin are especially important in this grade. The depth of back-fat is from one and one-fourth to two inches. It must be evenly distributed, however, not varying more than one-fourth or three-eighths of an inch at different points on the back and shoulders. Large sides of even width are

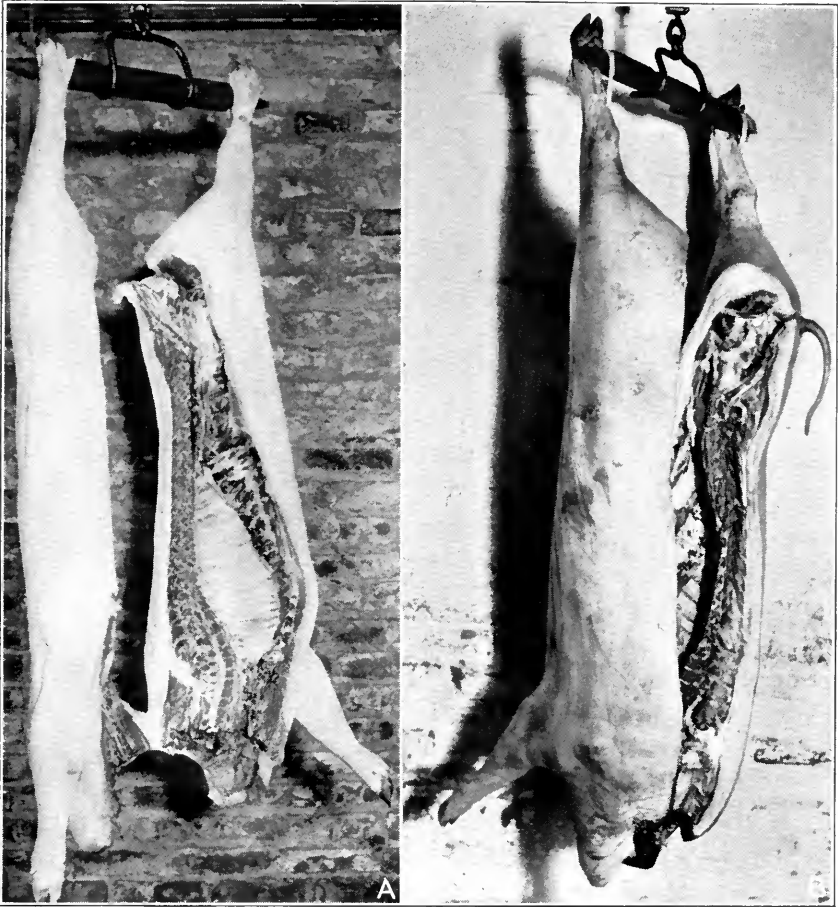


FIG. 58. CHOICE BACON HOGS.

also essential. This grade is used for the manufacture of "Wiltshire" and "Staffordshire" sides, "English" backs and bellies, and fancy breakfast-bacon bellies, also "Cumberland" sides to some extent. They weigh about 120 to 160 pounds, and only barrows are generally used. See Fig. 58.

Good bacon hogs include those that either lack the prime finish required of the highest grade or are too thickly or unevenly covered with fat; also those that are slightly deficient in length and depth of sides, or firmness and quality of flesh and fat. This grade, therefore, contains a much larger variety of carcasses than the choice grade, but they must nevertheless be reasonably well suited to the manufacture of smoked bacon and English meats. The thickness of back-fat must not be less than one nor more than

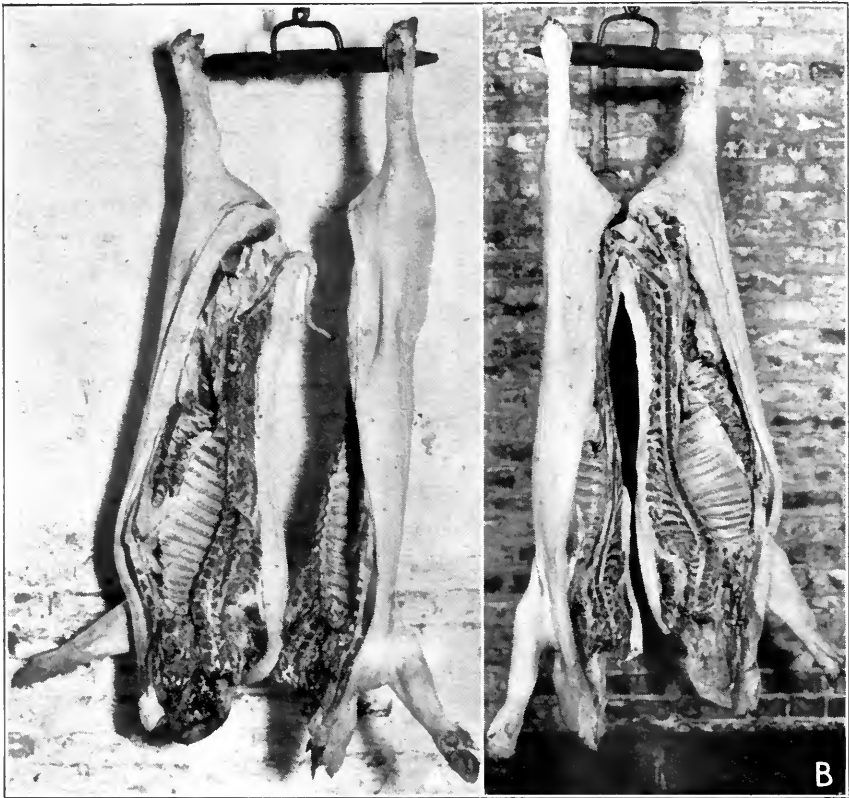


FIG. 59. BACON HOGS.

Good.

Common.

two and one-half inches. Average weights vary from about 110 to 170 pounds. "Cumberland", "Wiltshire" and long clear sides, "English" bellies and domestic breakfast-bacon bellies are made from this grade. See Fig. 59.

Common bacon hogs are below the average in finish, quality and weight. Tho a hog may have the proper amount of fat, if it is unevenly distributed over the back and belly and not well mixed with the lean, the sides are not adapted to making good bacon. Carcasses that are too fat to grade as good bacon hogs are classified as packers rather than common bacons. The latter are principally light unfinished carcasses, the poorest of which are so thin as to be known as "skippy" or "skinny" hogs.

The grade also includes some that have sufficient fat and weight but are soft and dark-colored in their flesh and fat and coarse in general appearance. Average weights of this grade are 90 to 110 pounds but a few range from 60 to 130 pounds. Com-

mon to medium bacon hogs weighing 90 to 130 pounds are used for long rib sides, and 60 to 110-pound averages are made into Dublin middles. The latter, tho of the same weights as heavy pigs, are generally distinguished from them by darker colored flesh and harder, whiter bones. See Fig. 59.

SHIPPERS

Shippers are similar to Butcher Hogs in shape and quality but are lighter in weight and generally not as highly finished, having only a moderate covering of fat and a comparatively small amount of leaf fat. As compared with Bacon Hogs they are shorter and thicker-bodied, have a deeper and less even covering of fat, heavier jowls and show less age in proportion to their weight and general development. They average 100 to 160 pounds and are dressed "head-on". (Fig. 60.) Since their chief use is for fresh retail trade they must be carefully selected, and carcasses of this weight that show a marked lack of quality such as thick, rough skin, coarse bones, dark color or very uneven covering are classified as light packing hogs. This is the only class of hogs that is extensively sold in the whole carcass. They are shipped in car lots to eastern points, especially New York City, Boston, Buffalo and various New England cities, where they are used both for fresh retail trade and for the manufacture of "home-packed" meats.

The term "shipper" is also applied by some packers to all other carcasses that are dressed "shipper style", and they are quoted in weights from 40 to 280 pounds. In this case, carcasses heavier than 160 pounds are selected from Loin Hogs, and those lighter than 100 pounds are the class described below as Pigs. Heavy hogs quoted in this way are bought principally by retailers in small cities and towns, but the trade is very limited and has been largely replaced by pork loins. Shippers of all grades are sold most extensively during the winter months, when demand for fresh pork is greatest.

PIGS

Pigs are carcasses of light young swine that are comparatively lean and light colored in flesh, with thin, soft skin, soft red bones, and weighing from 20 to 100 pounds. They are dressed "shipper style" and are often quoted together with Shipper Hogs. Thin and coarse or staggy pigs are frequently termed "throw-outs". Pigs are chiefly used for fresh trade in small retail markets, where the heavier grades are cut into chops, pork steaks, hams and other fresh cuts, and the smaller carcasses are retailed to certain laboring classes by whom they are used for boiling pur-

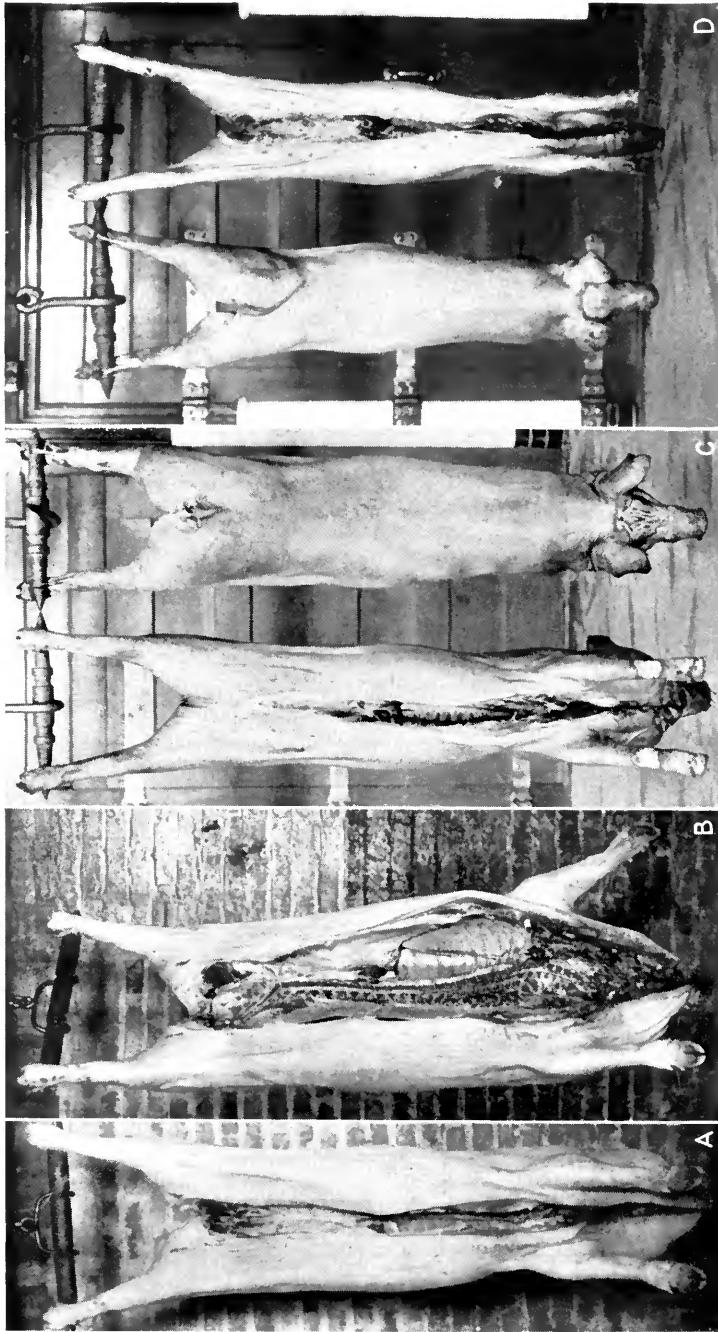


FIG. 60. A, B, SHIPPER HOG.
(B, SPLIT TO SHOW INSIDE.)

C, GOOD PIGS (60 lb.)

D, COMMON PIGS (20 lb.)

poses. New York is the leading shipping point for 80 to 100-pound pigs. The mining districts of Pennsylvania take many of the lighter averages, 60 pounds and under. "Export pigs" are selected carcasses of choice quality averaging 80 to 100 pounds, dressed "head off" and wrapped in muslin. See Fig. 60.

Roasting Pigs are dressed suckling pigs which are fat and smooth, with white skin and flesh indicating a well-nourished condition. They are country-dressed, as a rule, with head on and the carcass opened only from the crotch to the brisket. Roasters are principally shipped like winter lambs direct to the hotels and restaurants that use them. The most desirable size is 15 to 20 pounds but pigs weighing 10 to 30 pounds are used.

PORK CUTS

The various cuts made from dressed hogs may be divided into the following general classes: *Hams, Sides, Bellies, Backs, Loins, Shoulders, Butts and Plates* and *Miscellaneous*. See Fig. 61.

These products are quoted and handled according to the manner in which they are prepared or packed viz., Fresh Pork Cuts, Dry-Salt and Bacon Meats, Barreled or Plain-Pickled Pork, Sweet-Pickled Meats, Smoked Meats, "English" Meats and Boiled Meats. It will be necessary to define these terms before attempting to describe the grades and uses of the different classes of cuts.

Fresh Pork Cuts are sold either chilled or frozen. The bulk of the uncured product is disposed of within a few days after slaughter, during which time it is chilled at temperatures slightly above the freezing point. Freezing is employed for the storage of pork loins and other fresh cuts and edible offal when supply exceeds demand, and in some cases for keeping bellies, hams, shoulders and other cuts intended for future curing. Frozen pork, however, is not quoted nor handled to the same relative extent as frozen beef and mutton. Cut meats may also be kept without curing by packing in brine and storing at about 15° F., until it is desired to cure them in the regular manner. Cuts packed in a light brine and kept slightly above the freezing point for a short time are sometimes sold as "partly cured" meats.

Fresh pork cuts are taken more or less from all classes of hogs. Since the pork loin is by far the leading fresh cut, light loin hogs are more extensively used for fresh pork than any other class. The varying demand for loins determines to a considerable extent the method of cutting other classes of hogs from time to time. Tenderloins and spareribs are also primarily fresh cuts. Skinned shoulders, shoulder butts, hams, bellies, fat backs, and raw leaf fat are sold fresh to a small extent. Some packers pur-

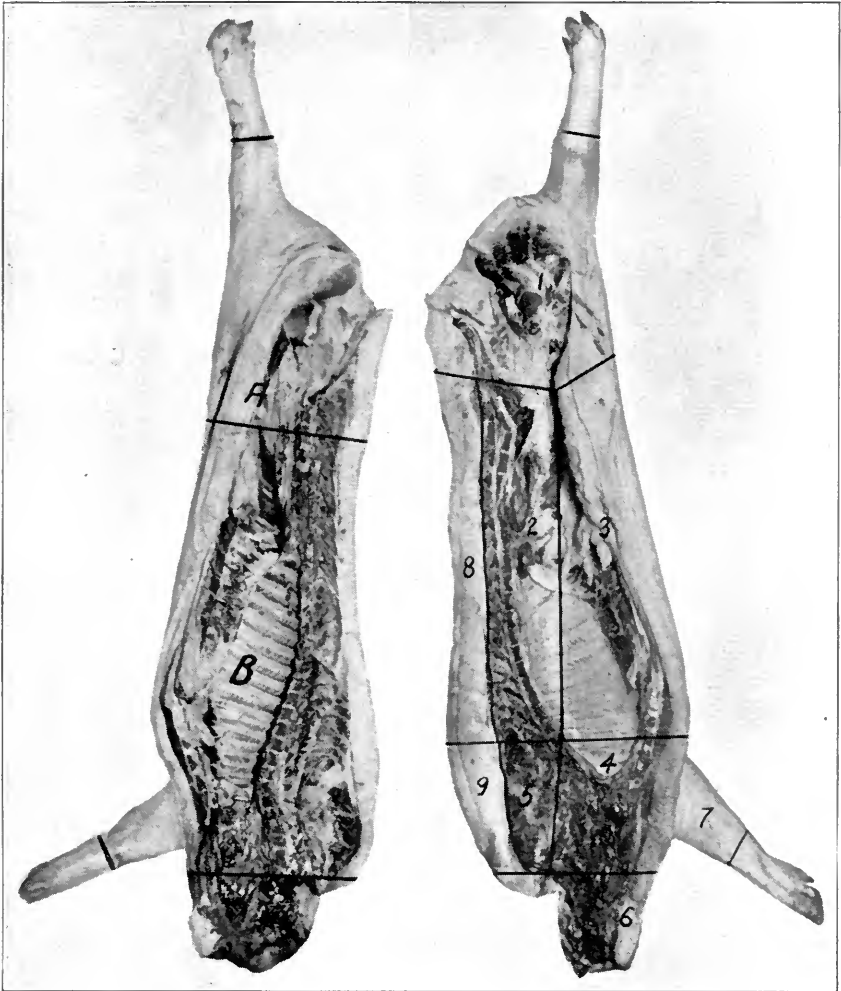


FIG. 61. PORK CUTS.

ENGLISH CUTS

- A. Long-cut ham
- B. Long side or middle

DOMESTIC CUTS

- | | | |
|------------------|----------------|----------------------------|
| 1. Short-cut ham | 6. Jowl | 2, 3, 8. Side |
| 2. Loin | 7. Hock | 4, 7. Picnic shoulder |
| 3. Belly | 8. Fat back | 5, 9. Shoulder butt |
| 4. Picnic butt | 9. Clear plate | 8, 9. Long fat back |
| 5. Boston butt | 2, 8. Back | 4, 5, 7, 9. Rough shoulder |

chase their raw material in the form of fresh cuts, such as bellies, hams, picnics, leaf and back fat, and convert them into smoked meats, lard and other products bearing the trade-mark of the packer.

Dry-Salt Meats are domestic cuts made from heavy fat packing and loin hogs, cured and shipped in coarse salt, and with a few exceptions, pumped* before salting. These are distinct from "English" meats both as to selection and packing. The cuts that are sold in this form are heavy sides, bellies, shoulders, fat backs, plates and jowls. The same cuts, and particularly bellies and short clear sides, are also quoted as bacon meats, which, after being cured in dry salt are smoked before shipping. The term *Bacon*, when used as a prefix, refers to dry-salt meats, while *Smoked Meats*, as described below, are cured in sweet pickle. Dry-Salt and Bacon Meats are generally shipped loose, but are sometimes put up in boxes containing 25 to 500 pounds.

Barreled or Plain-Pickled Pork is packed in plain salt brine in tight barrels (18" x 29") at 200 pounds net weight of cured pork per barrel (355 pounds gross). The strength of brine is varied somewhat according to the cuts of pork and their destination. The regulation of the Chicago Board of Trade governing standard barreled pork (except prime mess) is as follows: "Between October 1, and the last day of February,† inclusive, 190 lbs., and between March 1st and September 30th, inclusive, 193 lbs., of green meat shall be packed in each barrel, with not less than 40 lbs. of coarse salt and barrel filled with brine of full strength; or 40 lbs. of coarse salt and in addition thereto 15 lbs. of salt and barrel filled with cold water". Standard prime mess pork is packed 20 pounds salt and 12 ounces of saltpetre per barrel, otherwise as above. Barreled pork is made largely from sides of *Packing* and *Heavy Loin Hogs*, and consists principally of mess, fat back and belly pork of various grades. A much smaller proportion of the pork supply is barreled than formerly.

Sweet-Pickled (S. P.) Meats are cured in sweet brine. Standard cuts of this class are packed as follows for delivery on the Chicago Board of Trade: "300 lbs. block weight shall be packed in each tierce with either 22 lbs. of salt, 3 quarts of good syrup,

*Brine is injected into the meat by means of a perforated hollow needle attached to a force-pump.

This period of 5 months is known in the pork trade as the "winter packing season", and the balance of the year as the summer season. Formerly, wholesale pork packing was limited almost entirely to the winter season, but with improved facilities packers now handle about three-fifths of the annual supply during the "summer season".

12 ounces of saltpetre and tierce filled with water, or tierce filled with sweet pickle according to above standard". Various modifications of this formula are used for meats not intended for regular delivery. After curing, sweet-pickled meats are commonly packed in slack barrels or boxes, or sold loose, but are also sold in tierces (21" x 32"), either "pickle on" or "drained". The bulk of sweet-pickled and other sugar-cured meats are smoked before they reach the consumer, as explained in the following paragraph. A percentage of heavy sweet-pickled hams, picnics and loins are also boned out and sold as "boiled meats", which are described below. The cuts that are quoted as sweet-pickled meats are hams, picnics, New York cut and skinned shoulders, boneless butts, light bellies, and spareribs. This class of meats is cut principally from Butcher Hogs and from medium and light Packing Hogs; hams and picnics from all classes of hogs are generally sweet-pickled.

Smoked Meats are sweet-pickled as described above and smoked after curing. They also include light breakfast-bacon bellies that have been dry-cured in salt and sugar. In packing smoked meats, fancy hams and breakfast-bacon bellies are wrapped in "parchment" paper or canvas and packed in 50 and 100 pound boxes and crates. Other grades are sold either unwrapped, canvassed, or wrapped in burlap, and either loose, boxed or crated (100 to 500-pound packages) or packed in slack barrels or burlap sacks.

"English" Meats is a term applied to certain cuts that are dry-cured in English salt and saltpetre and primarily adapted to English trade, being given a milder cure than domestic meats. They are made principally from Bacon Hogs. The leading cuts of this class are "English" bacon sides, long-cut hams, clear backs and bellies, and square shoulders. After curing, these cuts are packed in borax or salt in 500 to 550-pound boxes for export. Borax is principally used, but a small proportion of "English" cuts such as long clears are shipped in salt, which continues the curing process during shipment. English meats are generally dried or smoked lightly after their arrival at British ports before being sold. Meats cured by this process are used to some extent in this country, being quoted as "English-cured". Sweet-pickled meats are also shipped in borax to England in considerable quantities.

Boiled Meats consist of hams, picnic shoulders and loins cured in sweet pickle, cooked in water and lightly smoked. The cuts are usually boned and the fat trimmed off within one-half to one inch of the lean before cooking. Boiled hams and shoulders are generally quoted as "rolled boneless" cuts, which are pressed in

a cylindrical form, or rolled and tied with cord. Three loins are tied together for boiling, making a "loin roll". Boiled meats are made principally from the heavier cuts but various averages are used, including 12 to 30-pound hams, 10 to 14-pound picnics and 14 to 24-pound loins. The boning and fattening reduces the weight of hams about 25 percent and of loins, about 60 percent.

Grading Pork Cuts

The grading of pork cuts is more complex than that of other meats since it involves not only their quality, shape, proportions of fat and lean, and weight, but also the styles of cutting and methods of packing by which they are prepared for different classes of trade. Many of the grade names refer merely to different methods of cutting and curing; but since they are applied only to cuts of specified quality, thickness or weight, the grades are in reality based on the latter factors to a large extent. The various cuts differ considerably as to methods of grading; consequently an adequate explanation of the factors involved and their relative importance can be presented only by describing the grades of each class.

HAMS

Hams are of two general kinds, short-cut and long-cut. The former are made from comparatively fat, plump hams, trimmed short and round at the butt, and the shank cut off at the hock joint. They are sold either as *Regular Short-Cut, Skinned, or Boneless Rolled Hams*. Long-cut hams are lean, long hams, with the butt left full and the foot taken off at the first joint below the hock. The principal grades are *Regular Long-Cut, Stafford Cut, Manchester Cut* and *Italian Cut Hams*.

Short-Cut or American Cut Hams are cut from the side midway between the hench-bone and slip-bone,* trimmed round at the butt, cushion† faced full, not undercut on the skin side, and shank cut off in or above the hock joint. Until 1909 the Board of Trade required that the shank be cut above the hock so as to expose the marrow. Practically all hams are sold as sweet-pickled or smoked meats. For regular delivery on the Chicago Board of Trade as sweet-pickled hams, they must average, in lots, not to exceed 16 pounds, with no ham to weigh less than 12 pounds and

*The hench-bone is the flat portion of the hip-bone that remains attached to the socket joint of the ham when the hog is split. The slip-bone is the portion of the hip-bone that lies in contact with the back-bone near the end of the loin.

†The cushion is the fat butt of the ham where the tail piece is cut off.

none to weigh over 20 pounds. The short-cut ham is the leading ham cut and has to a large extent taken the place of the long-cut ham in export trade.

Short-Cut Hams are graded by packers according to the brand of smoked hams for which they are suitable. For the first brand (known as "extra selected" or "fancy" sugar-cured hams), they are selected for thickness and firmness of lean meat, plump, well-rounded shape, solid, white fat of medium thickness ($1\frac{3}{4}$ to 2 inches on a medium-weight ham), smooth, soft skin, bright color, small shank and absence of bruises. The bulk of this grade weigh 10 to 16 pounds, 10 to 12 pounds being most desirable for family trade, and 14 to 16 pounds for hotels and restaurants. They are cut mainly from Butcher Hogs. Especial care is taken in curing and smoking to secure the proper flavor and color. See Figs. 62, 64. Second brand or second grade hams (frequently termed No. 1's) are deficient in one or more of the points just mentioned, but must be reasonably good in general quality and not exceedingly deficient in any particular. Many of them are too fat for the first brand. They may be cut from any class of hogs but the majority are made from Packing hogs. See Fig. 62. The third brand (also known as "seconds"), includes those from which a skin-bruise has been removed, also thin, light hams and any others which lack the shape and quality required for regular meat market trade. They are cut from Packing and Common Bacon Hogs. See Fig. 62. "Easter Hams" are light, lean hams (6 to 10 pounds) of good shape and quality but cut from smooth young pigs. They are sugar-cured and smoked and are in season during the spring and early summer.

Skinned Hams are cut short as explained above, the skin is removed down to the shank and the fat trimmed off within one inch of the lean. Until 1909 the Board of Trade regulation required the fat to be trimmed off within one-half inch of the lean. They are made from fat hams of first and second grades, weighing from 12 to 30 pounds, but the bulk weigh 16 to 22 pounds. Many skin-bruised hams are also skinned in order to remove bruises. This style is especially adapted to making boiled hams, which are in favor with restaurant trade for slicing. From one-tenth to one-fourth of the wholesale supply of hams are skinned under usual market conditions. They are quoted both as smoked, sweet-pickled and boiled meats. See Fig. 62.

Boneless Rolled Hams are made from sweet-pickled short-cut hams by lifting the skin, removing the surplus fat and the bone, and pressing or tying in the form of a roll with skin on. They are also made from skinned hams. 15 to 26-pound hams of first and second brands are used, and they are sold as boiled meats. See Fig. 65.



FIG. 62. SHORT-CUT HAMs.
 Skinned Ham. Second Brand. First Brand. Third Brand.



FIG. 63. LONG-CUT HAMs.
 Regular. Manchester. Stafford. Italian.

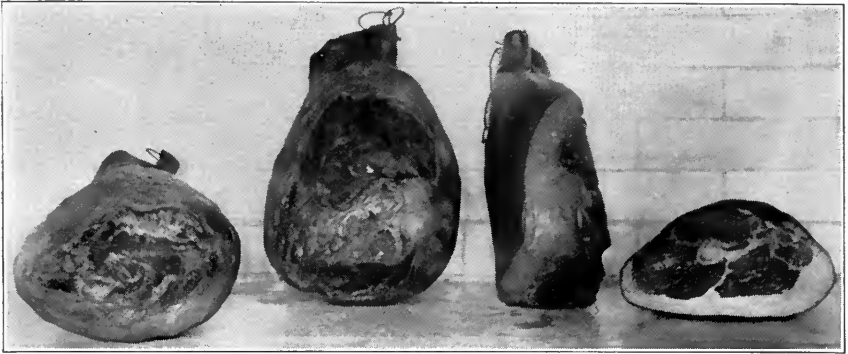


FIG. 64. SMOKED SHORT-CUT HAMS (FIRST BRAND).

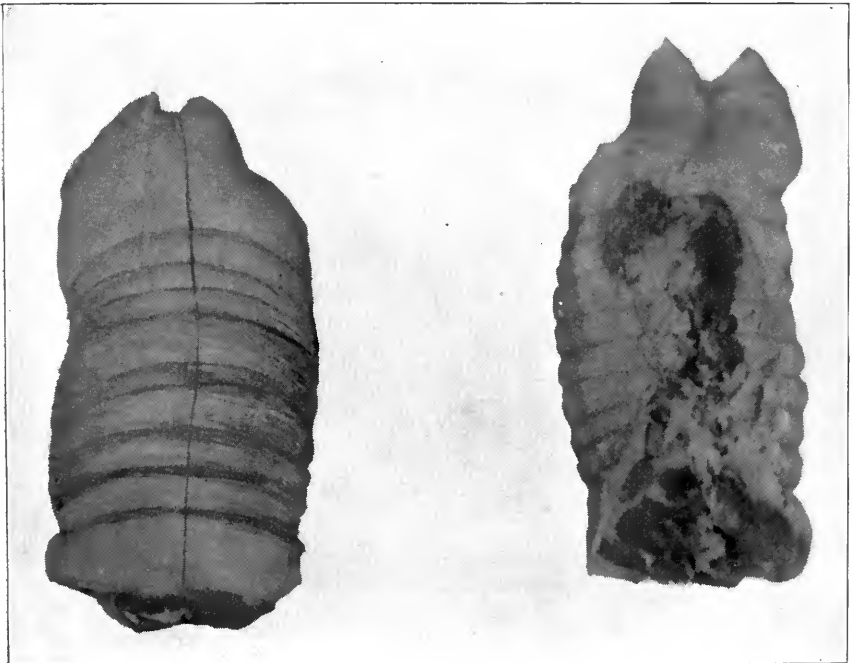


FIG. 65 BONELESS ROLLED HAMS

Regular Long-Cut Hams are lean, long hams with only one-half to one and one-half inches of outside fat, and are "cut from the side by separating with a knife the hip-bone from the rump, properly rounded, foot unjointed at first joint below the hock".* They are not faced; and the butt end is left full, which gives it a flat, lean appearance. (Fig. 63.) Average weights are 10 to 20 pounds but usually above 14 pounds. This cut is made from good and choice bacon hogs. It is no longer extensively used but was formerly the leading export ham. "Yorkshire" or "York" Hams are cut slightly longer at the butt than regular, but are otherwise as described above. Both are packed as explained under "English Meats." "Smithfield" or Virginia Style Hams are long-cut and very lean, cured hard, spiced, and "aged" for several months before using. They weight 9 to 18 pounds.

"*Stafford*" Hams are cut about 2 inches shorter at the butt end than regular long-cut hams, hench-bone taken out exposing the socket joint, and foot cut off at the first joint below the hock. They are cut from good and choice bacon hogs and cured for English trade. This grade is made principally from 14 to 18-pound hams. See Fig. 63.

"*Manchester*" Hams are a very lean grade of long-cut hams, comparatively flat in shape, butted like "Staffords", and averaging 14 to 18 pounds. See Fig. 63.

"*Italian*" Hams are very thin, long hams, of 9 to 18 pounds average, and of common to good quality. The hench-bone is removed as from "Staffords", the leg left extra long, the butt trimmed like American or short-cut hams, the ham pressed flat, dry-salt cured, smoked dark and seasoned with pepper. See Fig. 63.

Numerous other styles or grades of hams which were formerly packed in large quantities, especially for export trade, are no longer made or used sufficiently to be regarded as standard products.

SIDES

This class includes various grades and cuts of *Short Ribs*, *Short Clears* and "*English*" Bacon Sides.

Short Rib Sides.—Regular Short Ribs are middles of hogs from which short cut hams and regular or New York shoulders have been taken off, with back-bone and tenderloin removed, hench-bone and breast-bone sawed or cut down smooth and even with face of side, feather of blade not removed and no incision made in the side. This is a regular Board of Trade cut and is quoted in provision reports simply as "Ribs". It is made from medium to heavy packing hogs, in averages from 25 to 80 pounds

*Regulations Chicago Board of Trade.

but principally from 45 to 65 pounds. On the Board of Trade regular ribs averaging not less than 30 nor more than 60 pounds are deliverable at contract price; those over 60 and not over 70 pounds average are deliverable at a discount of 20 cents per 100 pounds; those over 70 and not over 80 pounds are discounted 30 cents per 100 pounds. Regular ribs are mainly shipped south either as dry-salt or bacon meat. The manufacture of this cut is confined largely to the winter months. It is used less extensively in proportion to other cuts than formerly but is still the leading side cut, over one-half the stocks of sides generally consisting of short ribs. Many are afterward converted into other cuts, as extra ribs, extra clears, backs and bellies, as determined by current prices of the various cuts. About one-fifth of the number of heavy hogs packed are cut into short ribs.

Jobbing or Rough Short Ribs consist of short ribs with the back-bone left in, the hog being centre-split leaving equal parts of the back-bone on each side. They are sold at a discount of 2 percent under regular ribs and must average not less than 30 nor more than 50 pounds for Board of Trade delivery. See Fig. 66.

Hard Short Ribs are made the same as Jobbing Ribs except that the hog is split so as to leave the back-bone all on one side. The side containing the back-bone is known as the Hard Side or Hard Short Rib and the other as the Soft Side, the latter being the same as the Regular Short Rib. They usually weigh 50 to 70 pounds, are cut from heavy packing hogs and are sold principally in the South as dry-salt pork.

Extra Short Ribs or "Extra Ribs" are made from Short Ribs by removing the loin. They average 35 to 50 pounds. 20 to 30 percent of the stocks of sides usually consist of Extra Ribs. See Fig. 66.

Square Cut or "English" Short Ribs are the middles of hogs from which square shoulders and long-cut hams have been cut, thus making the side shorter than a regular rib, square-cut and with the feather of the blade-bone out. They are selected from the better grades of medium weight packing hogs, and average 20 to 30 pounds. They are cured in English Salt and handled like other "English" Meats.

Short Clear Sides. Regular Short Clears are made from regular short ribs by removing the ribs and cutting reasonably square at each end. They are graded and handled in the same manner as short ribs. Short Clears average 30 to 70 pounds and to grade regular must average not less than 35 pounds. Their use has declined to a large extent in recent years as compared with certain other cuts, and only 1 to 5 percent of the stocks of sides are of this kind. It is primarily a domestic cut but is exported to some



Short Rib. Extra Short Rib. FIG. 66. SIDES. Short Clear. Extra Short Clear.



Fig 66a. SHORT RIBS, CUT FOR MESS PORK.



Heavy. FIG. 66b. PORK LOINS. Medium. Light.

extent. See Fig. 66. Square-Cut Short Clears are the same as Square-Cut Short Ribs except the ribs are taken out.

Extra Short Clear Sides or "Extra Clears" are made the same as short clears except that the loin is also removed. They may be made from extra short ribs by cutting out the ribs. The pieces weigh 25 to 60 pounds, and must average not less than 30 nor more than 60 pounds to grade regular. 10 to 20 per cent of the stocks of sides are usually made up of this cut. See Fig. 66.

"English" Bacon Sides. These so-called sides or long middles include both the side and shoulder, and in one instance (Wiltshires) the ham is also included. They are cured and packed as described under "English Meats", and after arrival in Great Britain are usually made into "rolled sides", which are dried for English trade, but in Scotland are usually smoked. American packers have discontinued manufacturing several cuts not mentioned below which were formerly used quite extensively.

"Wiltshire" Sides consist of the side, ham and shoulder left together in one piece; the blade-bone is taken out, foot cut off, the shoulder trimmed the same as "Cumberlands", hip-bone taken out, not backstrapped, the belly trimmed smooth and even, and leg of the ham cut off below the hock joint. These sides average 40 to 70 pounds and are selected especially for thickness of lean meat with a light, even covering of fat from $1\frac{1}{4}$ to 2 inches thick, not exceeding $1\frac{3}{4}$ inches in the best grades. They are made exclusively from choice lean bacon hogs, and are the highest grade of English bacon sides. The use of "Wiltshires" has greatly declined in recent years. They are shipped principally to the south of England. See Fig. 67.

"Cumberland" Sides "have the end from which the ham is taken cut square; the leg cut off below the knee joint; the shoulder ribs, neck-bone, back-bone and blood vein taken out; breast-bone sawed or cut down smooth and even with the face of the side; and should not be back-strapped or flanked".* They are made from good and choice bacon hogs and average 20 to 60 pounds, but the bulk run 25 to 40 pounds. This is by far the leading export side cut, and being made in various grades and averages is suitable for converting into other English side cuts, such as "Yorkshires", "Birmingham", "Staffords" and others which are no longer generally made in this country. See Fig. 67.

Long Rib Sides are made the same as Cumberlands except the shoulder bones are taken out and the leg cut off close to the breast. The average weight is 18 to 25 pounds. They are made from common to good bacon hogs, and shipped to Liverpool for distribution to Ireland and Wales.

*Regulations Chicago Board of Trade.

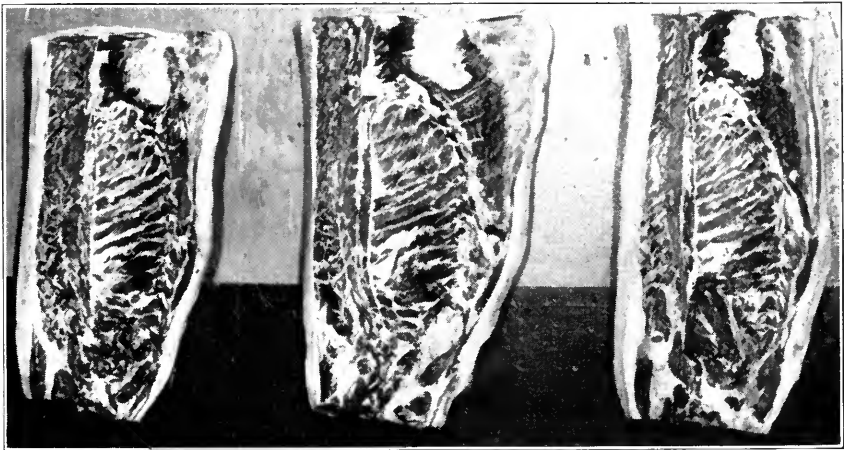
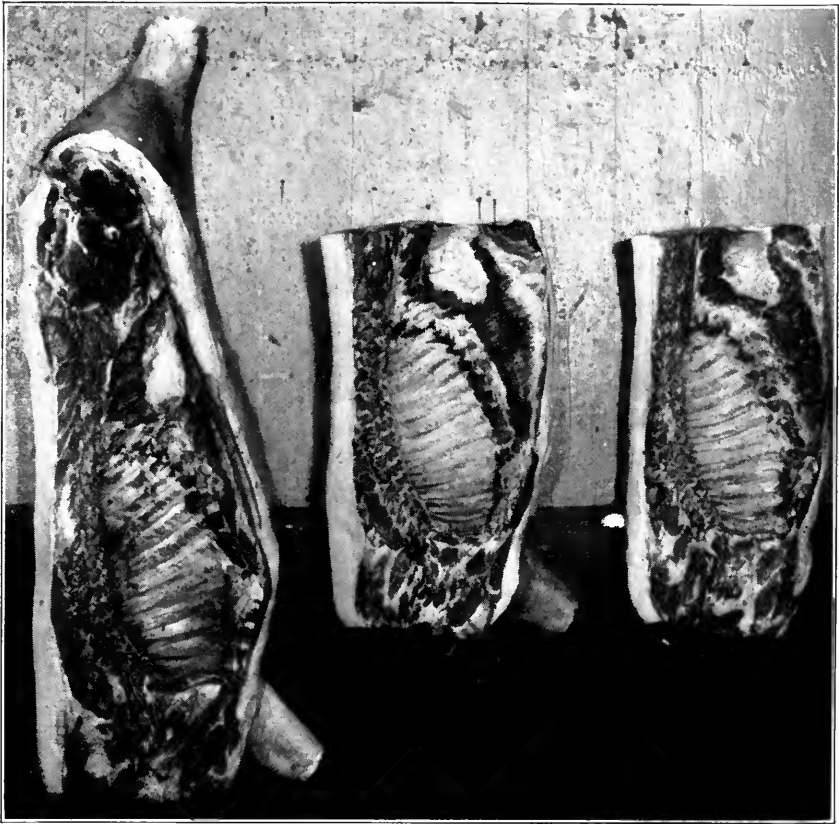


FIG. 67. LONG SIDES.

Wiltshire
Long Clear

Cumberland
Yorkshire

Dublin
Staffordshire

Long Clear Sides are cut the same as long ribs and in addition have the ribs taken out. For English trade, they are made from good bacon hogs weighing 120 to 160 pounds dressed, and the sides weigh 18 to 26 pounds. See Fig. 67. For regular Board of Trade delivery they must average not less than 45 pounds. The latter are used in domestic trade and Continental Europe, and are made from the heaviest bacon hogs and from comparatively lean butcher hogs. This cut is used to some extent both in export and domestic trade, but much less than formerly. Extra long clears are made like long clears except that the loin is also removed. They are seldom used.

"Dublin" Middles are thin lean sides cut like "Cumberlands" and in addition the leg cut off close to the breast. They are made from light, common bacon hogs and pigs. The sides weigh 12 to 20 pounds. See Fig. 67.

BELLIES

The grades of this cut are *Dry-Salt*, *Sweet-Pickle*, *Breakfast-Bacon* and "*English*" Bellies.

Dry-Salt Bellies are made from short rib sides of mixed packing hogs by cutting off the back. For delivery on the Board of Trade they must be "well cut and trimmed; no bellies that are coarse, bruised, soft or unsound shall be accepted".* However, they are not as closely trimmed as sweet-pickle bellies. They are made in averages from 10 to 45 pounds. About two-thirds of the stocks of bellies at Chicago usually consist of this grade. They are quoted as *Dry-Salt Rib* and *Dry-Salt Clear Bellies*, the latter having the ribs removed and being made usually from bellies weighing less than 25 pounds. When smoked they are known as "Bacon Meats". See Fig. 68.

Sweet-Pickle Bellies are made from butcher, bacon and good packing hogs, being "well cut and trimmed, to average, in lots, not to exceed 14 pounds".* The edges are squared and trimmed more closely than *Dry-Salt* bellies. They are made in 6 to 14 pound averages, packed the same as sweet-pickled hams and sold either as sweet-pickled or smoked meats. About one-third of the supply of bellies are sweet-pickled. They are quoted both as *Rib* and *Clear Bellies*, the latter having the ribs removed. See Fig. 68.

Breakfast-Bacon Bellies are clear bellies cut from bacon or light butcher hogs and selected with reference to firmness, color, proportions of fat and lean, smooth skin and general quality. They are trimmed still more closely than the regular sweet-pickled bellies. Selected bellies of this class weighing 4 to 10 pounds are

*Regulations Chicago Board of Trade.



FIG. 68 BELLIES.
English Clear.

Dry-Salt Rib

Sweet-Pickle Rib.

English Clear.

Sweet-Pickle Clear.

Fancy Clear.



FIG. 69, BACKS.
Short Fat Back.

English Rib.

English Clear.

Short Fat Back.

Sweet-Pickle Clear.

known as Fancy or Special Breakfast Bacon Bellies and are made into the best brands of sugar-cured breakfast-bacon. They are carefully selected, dry-cured in air-tight boxes and smoked lightly. The second brand includes bellies that are too fat for fancy bacon, or which lack the necessary firmness of flesh and thin smooth skin. They weigh 4 to 16 pounds. The third brand is made from bellies weighing 6 to 18 pounds that are either slightly bruised, or too deficient in general quality for the second brand. See Figs. 68, 70.

"English" Bellies are clear bellies weighing 10 to 20 pounds, cut from choice heavy bacon hogs and light butcher barrows, and selected for firmness and a large proportion of lean. They are cut square on all edges and packed as explained under "English Meats". See Fig. 68.

BACKS

The grades of backs are *Short Rib*, *Short Clear*, *Short Fat* and *Long Fat Backs*.

Short Rib Backs are made from short rib sides by cutting off the belly; they therefore contain the loin, back fat and back-ribs but not the back-bone nor tenderloin. It is a dry-salt cut, weighing 25 to 45 pounds and is not commonly made. Hard Backs are made from hard rib sides, thus containing the back-bone. "English" Rib Backs are made from Square Short Ribs, and average 12 to 20 pounds. See Fig. 69.

Short Clear Backs are "made from the sides of smooth hogs from which the bellies have been cut, back-bone and ribs taken out and the lean left on, tail-bone sawed off even with the face of

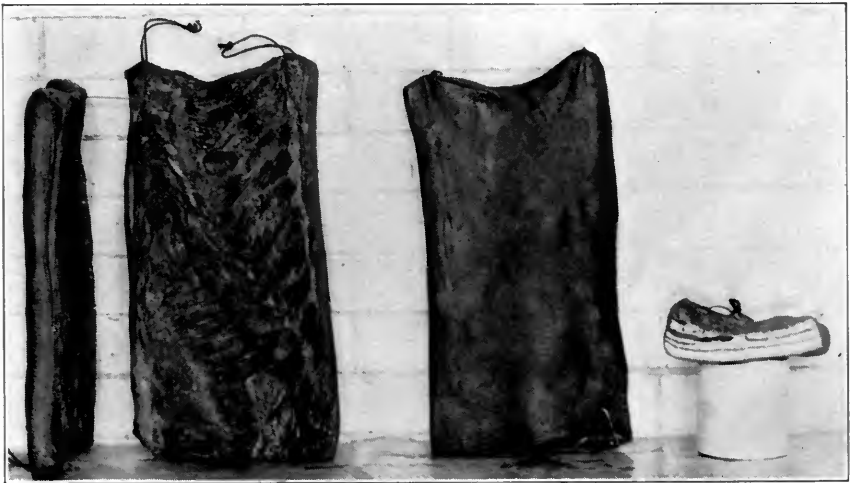


FIG. 70. SMOKED BREAKFAST-BACON BELLIES (FIRST BRAND).

the meat, and trimmed smooth and square on all the edges".* They are cut from medium and heavy packing hogs, dry-salted and sold largely in continental Europe. The weights run from 16 to 40 pounds. "English" Short Clear Backs are lighter than regulars, averaging 10 to 20 pounds, and are shorter at the butt end, being cut off in front of the hip-bone. They are packed like other English meats. See Fig. 69. Pickled Clear Backs are short clear backs of light weight and lean quality. They weigh 6 to 10 pounds and are sweet-pickled, smoked, and sold as "Loin Back Bacon" or "Breakfast Bacon Backs". See Fig. 69.

Short Fat Backs are "made from the sides of heavy, well-fatted hogs from which the bellies have been cut, back-bone and ribs taken out and all the lean taken off, to be trimmed smoothly and properly squared on all the edges".* This is one of the leading back cuts. It is made from packing and loin hogs when cutting pork loins, and is usually quoted as a dry-salt cut in 8 to 20 pound averages. See Fig. 69.

Export Short Fat Backs have the blade-bone taken out, are more closely trimmed and squared than domestic backs and are made principally in heavy averages, 16 to 40 pounds. Paprika Fat Backs are thin, light fat backs, weighing 4 to 8 pounds. They are dry-salted and seasoned with paprika.

Long Fat Backs consist of "the upper half of the side cut thru the centre of the ribs from the ham to and including the shoulder, with the loin and blade-bone taken out, trimmed smoothly and squared on all edges".* It is a dry-salt cut, not as commonly made as formerly and used only for export trade. See Fig. 61.

LOINS

Loins, consisting of the back with the fat trimmed off, are sold either as *Regular Pork Loins* or as *Loin Rolls*.

Pork Loins are made from sides of loin hogs, with the belly and back-fat cut off; they contain the back-bone, back-ribs and tenderloin, and have but a small amount of fat (one-fourth to one-half inch) on the outside. The loin is the leading fresh pork cut, and as it is retailed entirely in the form of chops and roasts, it must have reasonably good shape, bright color, firm, fine-grained flesh and good quality of bone. Loins are made principally from butcher hogs, but also to some extent from good packing and heavy bacon hogs. The weights of regular pork loins are 8 to 18 pounds and the price usually varies inversely as the weight, except occasional loins that are graded No. 2 on account of dark color or coarseness of flesh and bones. 14 pounds is the heaviest

*Regulations Chicago Board of Trade.

average generally used for fresh trade, and a few are made as light as 4 to 6 pounds. See Fig. 66b. Extra or Long Pork Loins include, in addition to the regular loin, the top or lean butt of the shoulder, but this cut is seldom made.

Tenderloins consist of short round muscles lying underneath and on each side of the back-bone; they are attached to the "slip-bone" and extend from the loin butt almost to the last rib. They weigh one-fourth to one pound each, but those weighing three-fourths pound or over are most extensively used. They are cut from hogs that are too heavy and rough to yield regular pork loins, and from which short ribs, mess pork and boneless loins are made. The tenderloin is sold only as a fresh cut.

Loin Rolls are made from heavy loins (15 to 22 pounds) by boning them completely, tying three boneless loins together lengthwise in the form of a roll, curing in sweet pickle, smoking and boiling. Light No. 2 loins are also packed in this manner in smaller quantities. Loin rolls are used by restaurants and delicatessen shops.

SHOULDERS

The standard grades are *Rough, Regular, Picnic, New York Cut, Skinned, Square, New Orleans Cut* and *Boneless Rolled Shoulders*.

Rough Shoulders are untrimmed shoulders as cut from the hog, separated from the side between the first and second ribs and with the jowl cut off square. They are quoted as fresh meats but are not extensively used. See Fig. 72.

Regular Shoulders are "cut as close as possible to the back part of the forearm joint without exposing the knuckle, (leaving 2 ribs on the shoulder), butted off square on top, the neck-bone and short ribs taken out, neck squared off, blood vein lifted and cut out, breast flap cut off and foot cut off on or above the knee joint".* They are made principally from hogs that are too heavy and rough for New York style shoulders, and at times when the supply of picnics exceeds the demand. About 15 percent of the stocks of shoulders generally consist of Regulars, of which about one-third are handled as dry-salt shoulders, averaging 15 to 20 pounds, and about two-thirds as sweet-pickled shoulders averaging 12 to 16 pounds. Sausage Shoulders are regular-cut shoulders which are unsuitable for dry-salt or sweet-pickle because of being trimmed to remove bruises, cut from "shoulder-stuck" hogs, or otherwise deficient, and are used for the purpose which their name indicates. Bladed Shoulders are cut the same

*Regulations Chicago Board of Trade.

as Regulars except the shoulder-blade is taken out and the corners rounded. Comparatively few are cut in this manner.

Picnics or *Calas* (formerly termed California hams) are cut $2\frac{1}{2}$ ribs wide, trimmed and packed as follows: "Shank cut off above the knee joint, trimmed as full on the face (lean surface) as possible, butt taken off to the edge of the blade, well rounded at the butt in the shape of a ham, breast flap taken off, and trimmed close and smooth, reasonably uniform in size, and to average, in lots, not to exceed 12 pounds. 300 pounds block (green) weight shall be packed in each tierce. Pickle the same as used for hams".* They are cut from good packing and butcher hogs, averaging 4 to 14 pounds, but principally 8 to 12 pounds, and are sold almost entirely as sweet-pickled, smoked and boiled meats. The lighter averages (4 to 8 pounds) are sometimes termed Boston Shoulders, and were formerly butted shorter than Calas and only slightly rounded; but Chicago and other western packers now trim them like Calas and designate both as Picnics. About 85 percent of the wholesale supply of shoulders are made into Picnics. See Fig. 74. Skinned Picnics are made from the fatter grades of Picnics by removing the skin and trimming the fat off within one-half inch of the lean. They average 6 to 10 pounds, and are sold largely as Boiled Meats.

New York Cut Shoulders are cut two ribs wide, butted one inch from blade-bone, trimmed smooth, neck and breast flap cut off, and shank cut off between knee and brisket. 8 to 14-pound grades are made for domestic trade and the bulk weigh 10 to 12 pounds, but heavier weights up to 18 pounds, are exported. They are made principally from butcher and packer hogs, and are quoted as fresh, smoked and sweet-pickled meats. They are not as extensively used as formerly in proportion to other cuts. See Fig. 72.

Skinned Shoulders are cut similar to New York Cut Shoulders and in addition the skin is taken off down to the shank and the fat trimmed off close to the lean. They weigh 6 to 16 pounds, and are sold fresh, sweet-pickled and smoked. They are the leading fresh shoulder cut used in city retail trade. See Fig. 72. Skinned shoulders with the shank cut off close to the breast are termed "Chicago Shoulders", or "Skinned Shoulders, hock off".

Square or 3-Rib Shoulders are cut three ribs wide, squared on all sides, neck-bones out, breast flap off, foot cut off at the knee joint, butted just above blade-bone, and so trimmed as to expose the lean as much as possible. This is the leading "English"

*Regulations Chicago Board of Trade.

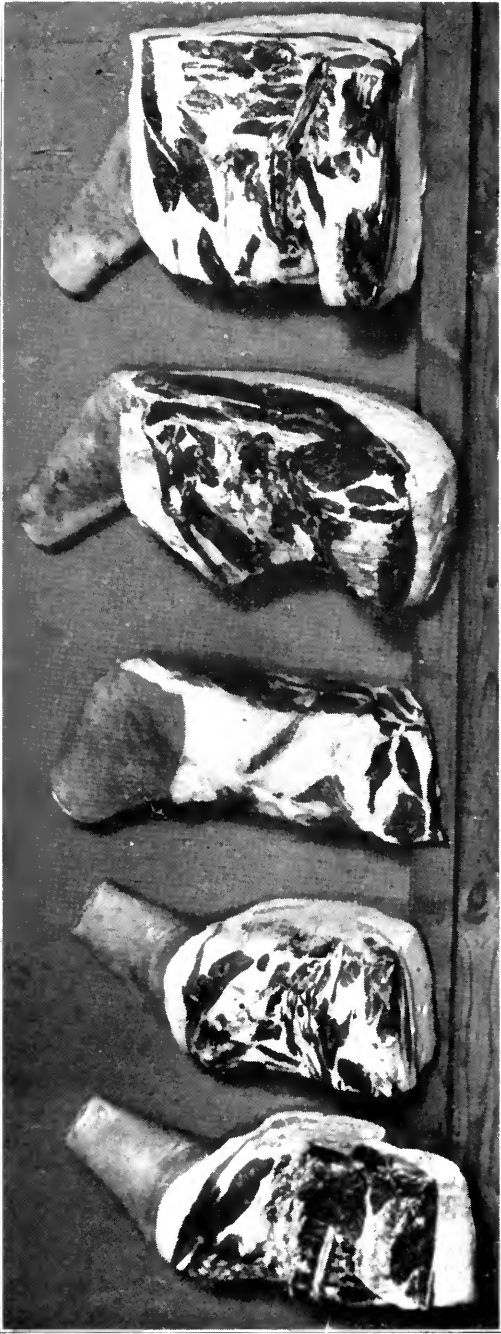


FIG. 72. SHOULDERS
 New Orleans,
 Skinned,
 Square,
 New York,
 Rough.



FIG. 73. BUTTS AND PLATES,
 Clear Plate,
 Regular Plate,
 Boneless Butt,
 Picnic Butt,
 Boston Butt,
 New York Butt.

shoulder cut, and is made in averages from 10 to 20 pounds. See Fig. 72.

New Orleans Cut Shoulders are made $1\frac{1}{2}$ ribs wide, smooth and rounded on neck end, part of shoulder butt left on and neck-bone out. They are cut principally in 12 to 14 pound averages, but are also made from 10 to 16 pounds, from shoulders that are too rough and fat to make New York Cut or Picnic Shoulders. This is a dry-salt cut. See Fig. 72.

Boneless Rolled Picnics are made from heavy picnics by lifting the skin, removing the surplus fat and the bone, pressing or rolling and tying with cord in the form of a roll in the same manner as rolled hams. They are also made from skinned picnics. Boneless rolled shoulders are made similarly from regular shoulders. They are sold as boiled meats.

BUTTS AND PLATES

Butts are cut from the end or top of the shoulder and from the jowl. Plates are made from shoulder butts. The various grades of these cuts are *Boston Style*, *Milwaukee Style*, *Boneless*, *Buffalo Style*, *New York Style*, *Picnic*, *Dry-Salt* and *Square-Cut Butts*; *Regular Plates*, *Clear Plates* and *Back Plates*.

Boston Style Butts are the ends or top pieces cut from heavy shoulders when making picnics; the neck-bone, ribs and surplus fat being removed and the piece trimmed smooth. They include the end of the shoulder blade. Average weights are 3 to 7 pounds. They are principally barreled and exported to Germany, Denmark and other European countries, but are also sold fresh for domestic retail trade. See Fig. 73.

Milwaukee Style Butts are the same as Boston butts with the neck-bone and rib left on.

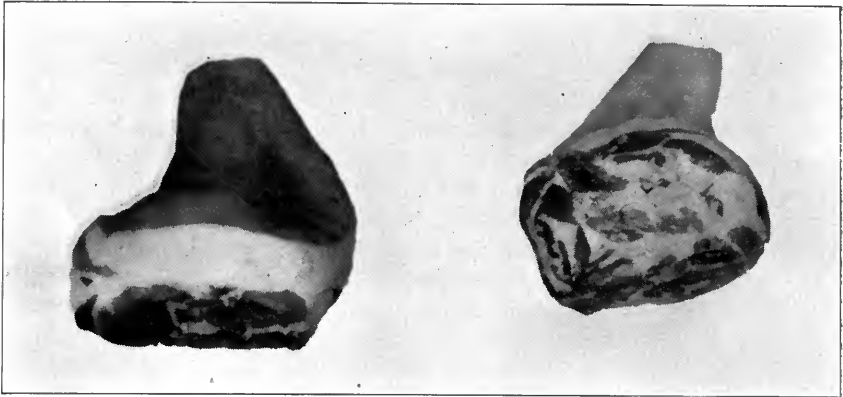
Boneless Butts or *Lean Butts* (also termed *Cala Butts*) consist of the lean, boneless portion of Boston butts between the blade-bone and neck-bone. When sweet-pickled and smoked like hams this cut is known as a *Cottage Style* butt. See Fig. 73.

Buffalo Style Butts are cut the same as boneless butts except that the neck-bone is left in. They are used fresh.

New York Style Butts are shoulder butts cut from picnics of the thinner and lighter grades. They contain the neck-bone, fat and lean, and are mainly plain-pickled. See Fig. 73.

Picnic Butts are picnics from which the surplus fat and the skin are removed and the shank cut off close to the breast. They are not trimmed as closely as regular picnics. See Fig. 73.

Dry-Salt Butts are made from the jowl (lower part of the neck and cheek), with the edges trimmed smooth and the piece



Heavy.

FIG. 74. PICNICS.

Light.



FIG. 75. SPARE RIBS (FULL SHEET). SPARE RIBS (HALF SHEET).
 DRY-SALT BUTT (JOWL). SQUARE-CUT BUTT. VIRGINIA-STYLE JOWL.

pounded flat. They weigh 3 to 5 pounds and are usually packed as their name indicates but are sometimes barreled. Virginia-Style jowls are made from the smaller end of the lower jaw including the teeth, and are made both tongue in and tongue out. They are sugar-cured and smoked, but are not extensively made. See Fig. 75.

Square-Cut Butts are also made from the jowl but are more closely trimmed and squared. They average 2 to 4 pounds and are dry-salted or barreled. See Fig. 75.

Regular Plates are made from shoulder butts by removing a boneless butt, thus making a fat piece with a facing of lean, containing the end of the blade-bone, and weighing 6 to 12 pounds. They are packed either as dry-salt or barreled pork. When made with the blade-bone out they are known as Antwerp Backs. See Fig. 73.

Clear Plates are made from shoulder butts by removing a Boston butt, and are a clear fat cut, weighing 4 to 8 pounds. They are generally dry-salted but are barreled to some extent. See Fig. 73.

Back Plates are made from long fat backs, cut into keystone-shaped pieces weighing $3\frac{1}{2}$ to 10 pounds. They are both barreled and dry-salted.

MISCELLANEOUS

The cuts described under this head consist principally of barreled pork and other products made from sides and shoulders of packing hogs. They may be grouped as follows: *Mess Pork*, *Belly Pork*, *Back Pork*, *Shoulder Pork*, *Spareribs*, and *Trimnings*.

Mess Pork. Regular Mess Pork is "made from sides of well fattened hogs, split thru or one side of the back-bone, and equal proportions on both sides, cut into strips of reasonably uniform width, properly flanked and not backstrapped".* See Fig. 66a. The regular proportion of flank and shoulder cuts must be included. The strips average about six inches in width, and not over sixteen pieces may be packed in a barrel for regular delivery. Mess Pork is made from rough and heavy packing hogs and occasionally from heavy loin hogs. During the early years of the packing industry about one-third of the wholesale pork product consisted of mess pork, but it has been largely replaced by other cuts during recent years, and is now only two or three percent of the supply. Approximately one-half of the Barreled Pork supply is Mess Pork. On the Board of Trade it is quoted simply as "Pork". Mess pork packed between October 1 of one year and September 30 of the succeeding year is "new pork" until January 1 of the following year, and is thereafter termed "old pork". Mess pork made during December, January and February must have been packed at least ten days before delivery, and that delivered during the period from March to November, inclusive, must have been packed at least thirty days before delivery to grade regular. It is barreled and shipped principally to the southern states, northern lumber camps and South America. Short-cut Mess Pork is described in connection with Back Pork.

Light Mess Pork is "made from the sides of reasonably well fattened hogs; and in all other respects to be cut, selected and packed the same as mess pork, except that as many as 22 pieces may be put into each barrel".† It is made principally from medium packing hogs.

*Regulations Chicago Board of Trade. "Backstrapping" refers to trimming a strip of fat from the edge of the side, above the back-bone.

†Regulations Chicago Board of Trade.

Prime Mess Pork is made from the shoulder and side, containing the back-bone and ribs, cut into square pieces of about 4 pounds each. The shank is cut off close to the breast. In making this cut the side is split lengthwise, the back cut into about six pieces and the belly into four. It is made from light packing hogs.

Extra Clear Pork is "made from the sides of extra heavy, well-fatted hogs, the back-bone and ribs to be taken out, (the same as short clear sides) the number of pieces in each barrel not to exceed 14, and in all other respects to be cut, selected and packed in the same manner as mess pork".* This cut is not extensively made.

Clear Pork is "made from the sides of extra heavy, well-fatted hogs, the back-bone and half the ribs next the back-bone to be taken out, the number of pieces in each barrel not to exceed 14, and in all other respects to be cut, selected and packed in the same manner as mess pork".* It is no longer in general use.

Loin Clear Pork is "made from the sides of medium-weight packing hogs, the loin, back-bone and back ribs being removed and belly ribs left in". It consists of extra short ribs cut into strips, and is also known as Long-Cut Clear Pork. The pieces average five inches in width. It is barreled like mess pork and sold especially to New England trade.

Belly Pork. Regular Belly Pork consists of heavy, fat rib bellies cut into 5-inch widths and packed as plain-pickled pork in barrels of 50 to 60 pieces. This pork is made from the same grade of bellies as Dry-Salt Rib Bellies.

Brisket Pork Rib is made by cutting a 5-inch strip from the brisket end of heavy rib bellies (14 to 20 pounds average) and packing like other barreled pork. The pieces average about 4 pounds each. This cut is made only when it is desired to reduce the weight of heavy bellies. Clear Brisket Pork is made in the same manner as the above except the pieces are cut from clear bellies. Fancy Clear Pork is a strip cut from the brisket end of fancy breakfast bacon bellies, averaging 1 to 1½ pounds per piece. It is either barreled or sugar cured and smoked.

Lean Belly Pork consists of lean clear bellies, 13 to 15 pounds average, cut into three pieces each and barreled in plain pickle.

Back Pork. Regular Back Pork (Short Cut Mess, or Family Back Pork) is "made from the backs of well-fatted hogs, after bellies have been taken off, cut into pieces of about 6 pounds each, and in all other respects to be cut, selected and packed in the same manner as mess pork".* This cut contains the loin, back-bone and back ribs, with tenderloin out, and the pieces are cut 6 inches wide, averaging 4 to 6 pounds.

*Regulations Chicago Board of Trade.

Clear Back Pork is "made from the backs of heavy, well-fatted hogs, after bellies have been taken off, and back-bone and ribs taken out, cut into pieces of about 6 pounds each, and in all other respects to be packed in the same manner as mess pork".* In other words, it consists of Short Clear Backs cut into strips about 6 inches wide, and is the same as Regular Back Pork with the rib removed. It is sometimes called Loin Clear Pork. The pieces average 2 to 7 pounds.

Fat Back Pork or Short Cut Clear Pork is made from short fat backs by cutting them into 5-inch strips. The pieces average from 2 to 7 pounds and are packed like mess pork. Speck is made from fat backs, cut into strips, cured in plain pickle and seasoned with pepper.

Ham Butt Pork (Loin End or Rump Pork) consists of triangular pieces cut from the ham end of short clear backs or sides and includes a portion of the tail-bone. It is made when cutting short-cut hams and "English" sides, or when it is desired to reduce the weight of heavy sides or backs. It is packed in barrels, the pieces averaging 3 to 4 pounds.

Shoulder Pork consists of the following products made from shoulders and butts:

Extra Prime Pork is "made from heavy untrimmed shoulders cut into 3 pieces; the leg to be cut off close to the breast, and in all other respects to be cut, selected and packed in the same manner as mess pork".* The pieces average about 4 pounds. This and the preceding cut are not used as extensively as formerly.

Boston Style Butt Pork is made from Boston Style Butts averaging 4 to 7 pounds, packed in plain pickle.

Bean Pork or Clear Butt Pork is made from the jowl or fat cheek of the hog, cut square, trimmed smooth and averaging 3 to 4 pounds, packed in plain pickle.

Spareribs consist of the ribs trimmed from the carcass or side with as little lean as possible. They are termed "full-sheet", "half-sheet" and "back-bone" spareribs according as they are cut from full sides, bellies or backs respectively. They are essentially a fresh pork product and are sold in retail markets especially in fall and winter, for which purpose "half-sheet" ribs are principally used. Spareribs are also quoted as sweet-pickled, smoked and dry-salt meats. They are packed in limited amounts in sweet pickle at times when the demand for fresh spareribs is dull; dry-salt spareribs are taken from dry-salt sides and bellies when making them into clear cuts after curing. Both pickled and dry-salt spareribs are smoked to a limited extent. See Fig. 75.

*Regulations Chicago Board of Trade.

Various other meats are handled and quoted similarly to spare-ribs. Hocks consist of the shank or foreleg cut from the shoulder, including the portion between the breast and knee. They are sold either fresh or barreled. Back-bones, neck-bones and blade-bones are to some extent sold fresh like spareribs, but are usually tanked.

Trimnings are of two grades: Special Lean. or "A" grade, and Regular or "B" grade. Special Lean or Berliner *Trimnings* consist of the larger pieces of meat with fat cut off and are used especially for making Berliner sausage. The regular grade is made up of small pieces of fat and lean, miscellaneous in shape and quality, and contains about 40 to 50 percent fat. Both grades are almost entirely utilized in sausage manufacture.

LARD

From one-tenth to one-third of the hog carcass is made into lard in large packing-houses, the proportion varying with the relative price of lard and grade of hogs. The standard grades are *Kettle-Rendered Leaf*, *Kettle-Rendered*, *Neutral*, *Prime Steam*, *Refined* and *Compound Lard*. They differ as to the kinds of fats they contain, methods of rendering, color, flavor and grain.

KETTLE-RENDERED LEAF LARD

This consists of leaf fat only, rendered at about 248° F. in open-jacketed kettles, without the addition of water and without subsequent refining. It is the whitest in color and finest in grain and flavor of all grades of lard. Kettle-rendered lard is distinguished from other kinds by the wavy or fluffy appearance of the surface, known as a "crinkly top", and this is characteristic especially of leaf lard. It is sold principally in pails of various sizes for retail trade. Most packing firms do not render pure leaf lard but make the leaf into Neutral. Raw leaf fat is also sold fresh to butterine manufacturers and is used to some extent by retail trade.

KETTLE-RENDERED LARD

This grade is made from back fat with or without a proportion of leaf or "leaf scraped" lard, (seldom exceeding 20 percent) and not over 5 percent of lard stearin.* Ham-facing fat and fat trimmings are also used at times. It is rendered in either open or closed kettles but not under pressure nor in contact with live steam. The

*Lard stearin is the residue left after pressing the oil from lard. Having a high melting point, it is usually mixed with lard during the summer months or when shipping to a warm climate.

open-kettle product is sometimes branded "Country Style Lard". This is the highest grade of lard made in most packing houses, and is excelled in whiteness, grain and crinkly appearance of the surface only by genuine leaf lard. Kettle-rendered lard more readily becomes rancid than refined lard, hence flavor and keeping qualities are especially important in this grade. It is made in comparatively limited quantities, and is packed in 3 to 50 pound pails for retail trade, 50 to 80 pound tubs, and tierces.

NEUTRAL LARD

Neutral Lard is made from leaf or back fat melted in water-jacketed open kettles at about 128° F., at which temperature the fat partially liquifies without cooking. No. 1 Neutral is made from leaf fat only. When drawn off and strained the melted fat is tasteless, free of acids and impurities, smooth-grained and remains unchanged in odor and color. It is sold in tierces and is used principally in the manufacture of butterine or oleomargarine. This grade of lard is largely exported, Rotterdam being the principal foreign market for it. No. 2 Neutral lard is made from back fat melted in the same manner as the No. 1 grade. It is not as white in color nor as fine in grain but is used for the same same purposes when No. 1 Neutral is high in price.

PRIME STEAM LARD

Prime Steam Lard is made from fat trimmings (ham, shoulder, belly, jowl and head fats), internal or "killing fats" and other fat parts, sometimes including entire fat backs, jowls, etc., rendered in closed tanks under about 40 pounds direct steam pressure (240° F.) without refining, stirring or bleaching. It is darker-colored and coarser-grained than other grades of lard, and is the form in which nog fats can be most economically stored and shipped. It is stored in tanks and tierces, and shipped in tierces or tank cars. Prime steam lard is refined before using, being converted into other grades of lard or used in Compound. Nine-tenths or more of the lard made at Chicago is of this grade. For delivery on the Board of Trade, "it must have proper color, flavor and soundness for keeping, and no material which has been salted must be included. Prime steam lard of superior quality as to color, flavor and body may be inspected and labeled as 'Prime Steam Lard, choice quality'". When rendered from cured fats such as sweet-pickled ham and shoulder fat, or for other reasons defective in color, flavor or grain, it is graded as No. 2 Steam Lard, being darker in color and coarser in grain than the regular grade.

REFINED LARD

Refined Lard is made from Prime Steam Lard by a bleaching and stirring process, consisting of rapid agitation with fuller's earth at about 180° F., followed by pressing through filter cloths and chilling. A proportion of lard stearin, not exceeding 5 percent, may also be added. If oleo stearin, tallow or more than 5 percent of lard stearin be added, the product may not be labeled "Pure Lard", and the added fats must be named on the package. It is sold in tierces, barrels, cans and pails, and is packed in 28 and 56-pound boxes for export.

COMPOUND LARD

Compound Lard or Lard Compound is a mixture of lard, stearin or other animal fat, and vegetable oil (usually cottonseed oil). All the ingredients must be named on the label, and the proportion of lard must equal or exceed that of any other one of the ingredients.

Note.—Compounds, or lard substitutes, differ from compound lard in that they contain little or no lard but are composed of oleo stearin, lard stearin and tallow mixed with refined cottonseed oil. The proportion of cottonseed oil is usually 80 to 85 percent. The amount of this product manufactured is approximately equal to that of lard. It is packed in the same kinds of receptacles as refined lard.



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143-152 1910-11



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